

Catalogue

LUBRICANTS & MAINTENANCE FLUIDS

MANNOL®

Sudheimer Car Technik
Vertriebs GmbH

SCT-Vertriebs GmbH is an international manufacturer and supplier offering you excellent service with a maximum variety of items to choose from and highly flexible delivery capabilities. Our selling representation includes motor-, gear- and industrial oils, lubricants, oil and fuel additives, car-care products and auto tools under registered trademarks MANNOL, SCT and SCT-Filter. Our company headquarter is in Wedel near Hamburg, Germany, but our clientele is worldwide. With currently over 100 trading partners on four continents, we have joined together in an effective production and sales network and we are constantly looking for new markets and ideas.

The entire range of oils and greases is produced on our own production facilities. Most of the oils in terms of quality not only corresponds, but also surpasses the technical indicators defined by international standards API and ACEA. High-quality oils for engines have passed testing and have received acknowledgement from: Daimler, VW/Audi, MAN, Volvo, Ford, BMW and General Motors. Only elite raw materials, base oils and additives from world leading suppliers, contemporary recipes and the latest technology are used for our production of lubricants. The manufacturing process is fully automated – that is a major factor for the low-cost production and competitive ability. Analysis and production quality assurance of products are made on our own laboratories equipped modern and secured with the newest technologies to monitor the quality, manufactured by the method of ASTM. Due to this, any issues related to the date of production, output parameters, data analysis, etc. are solved quickly and efficiently.

The production range includes full structure of demand, to ensure reliable operation of any vehicle part such as: brake systems, cooling systems, lubrication systems and loaded friction units, requiring the use of high-quality greases.

The SCT production assortment is so various and wide so that it can satisfy interests of all consumers of lubricants: from the largest industrial enterprises and vehicle fleets to the service centres and individual consumers. Our company actively cooperates with large commercial networks, providing not only service products (motor & gear oils and lubricants), tools for repair, as well as consumables: filters, brake pads, wiper blades, etc. for nearly any car. To find many interesting facts about our products take advantage to use the continuously updated online catalogue. It will bring an essential contribution on simplifying your daily work processes, that allows you a quick and easy process of locating the desired service product.



ENGINE OILS FOR CARS AND TRANSPORTERS

MANNOL®



7906 ENERGY ULTRA JP

Synthetic engine oil



Description:

MANNOL Energy Ultra JP is a modern premium class engine oil for lubrication of all 4-stroke engines of Japanese, Korean and American light vehicles, minivans and SUV's. Ideal for up-to date gasoline engines with turbocharging and multi-valve technology (VTEC, VVT-i, CVVT, VTC, VVL, VVTL-i, MIVEC etc.). The combination of unconventional base oils together with the latest additive technology guarantees a motor oil that provides exceptional protection against wear and keeps the engine clean while ensuring fast oil penetration of engine.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			5W-20
Density at 15°C	D 1298	kg/m³	852
Viscosity at 40°C	D 445	CSt	44,92
Viscosity at 100°C	D 445	CSt	8,27
Viscosity at -30°C	D 5293	CP	4364
Viscosity index	D 2270		162
Flash point COC	D 92	°C	224
Pour point	D 97	°C	-45
TBN	D 2896	gKOH/kg	10,12

Meets the requirements/specifications:

SAE 5W-20, API SN, ILSAC GF-5;
FORD WSS-M2C945-A/B/WSS-M2C930-A/WSS-M2C925-A, GM dexos1, CHRYSLER, HONDA, ACURA, HYUNDAI, ISUZU, MAZDA, MITSUBISHI, TOYOTA, NISSAN, SUBARU, SUZUKI, KIA.

Volume/weight:/Art.-Nr.:

1L MN7906-1 **10L** MN7906-10 **208L** MN7906-DR
4L MN7906-4 **20L** MN7906-20 **1000L** MN7906-IBC
7L MN7906-7 **60L** MN7906-60

7907 ENERGY COMBI LL

Synthetic longlife engine oil



Description:

MANNOL Energy Combi LL is a multigrade synthetic engine oil for modern gasoline and turbo diesel engines with pump-injector units. Provides high pump ability at cold cranking. Has optimal viscosity at wide-ranging temperatures. Effectively prevents from wear-out and provides extreme cleanness of the engine components. Used in the engines with prolonged oil-change interval (LongLife) and without it.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			5W-30
Density at 15°C	D 1298	kg/m³	850
Viscosity at 40°C	D 445	CSt	64,40
Viscosity at 100°C	D 445	CSt	11,30
Viscosity at -30°C	D 5293	CP	4820
Viscosity index	D 2270		170
Flash point COC	D 92	°C	224
Pour point	D 97	°C	-48
TBN	D 2896	gKOH/kg	9,20

Meets the requirements/specifications:

SAE 5W-30, API SN/CF, ACEA C3;
VW 504.00/507.00, MB-Approval 229.51, BMW LL-04, PORSCHE C30.

Volume/weight:/Art.-Nr.:

1L MN7907-1 **10L** MN7907-10 **208L** MN7907-DR
4L MN7907-4 **20L** MN7907-20 **1000L** MN7907-IBC
5L MN7907-5 **60L** MN7907-60

MANNOL®

7908 ENERGY PREMIUM

Fully synthetic engine oil



Description:

MANNOL Energy Premium is fully synthetic engine oil that Is designed to be used in petrol and diesel engine vehicles, which are equipped with turbochargers or not, equipped with particulate filters (DPF, FAP) or not and that have other exhaust emission cleaning systems. The contemporary additive set ensures maximum protection against wear and the extraordinary cleanliness of the engine separate parts under hard operation conditions. The completely synthetic basis guarantees an extraordinary stability of all engine oil characteristics, even if the service intervals are increased. May be used in vehicles equipped with liquid gas and natural gas drives (LPG/CNG).

Meets the requirements/specifications:

SAE 5W-30, API SN/CF, ACEA C3;
BMW LL-04, MB 229.51, VW 505.01/505.00/502.00,
GM dexos2.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			5W-30
Density at 15°C	D 1298	kg/m³	850
Viscosity at 40°C	D 445	CSt	69,20
Viscosity at 100°C	D 445	CSt	11,60
Viscosity at -30°C	D 5293	CP	5820
Viscosity index	D 2270		163
Flash point COC	D 92	°C	224
Pour point	D 97	°C	-42
TBN	D 2896	gKOH/kg	7,56

Volume/weight:/Art.-Nr.:

1L MN7908-1 **10L** MN7908-10 **208L** MN7908-DR
4L MN7908-4 **20L** MN7908-20 **1000L** MN7908-IBC
5L MN7908-5 **60L** MN7908-60

7914 ENERGY FORMULA JP

Synthetic engine oil



Description:

MANNOL Energy Formula JP is modern premium class engine oil for the lubrication of all 4-stroke engines of Japanese, Korean and American light vehicles, minivans and SUV's. Optimum for up-to-date diesel and gasoline engines (GDI,D-4D and NEO-DI) with multi-valve technology and turbocharging (DOHC, VVT-i, VTC, CVVT, VTEC, VVL, VVTL-i, MIVEC etc.). The combination of unconventional base oils together with the latest additive technology guarantees a motor oil that provides exceptional protection against wear and keeps the engine clean while ensuring fast oil penetration of engine.

Meets the requirements/specifications:

SAE 5W-30, API SN, ILSAC GF-5;
GM dexos1, NISSAN, MITSUBISHI, SUZUKI, TOYOTA,
HONDA, SUBARU, GM, HYUNDAI, KIA MOTORS.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			5W-30
Density at 15°C	D 1298	kg/m³	850
Viscosity at 40°C	D 445	CSt	67,03
Viscosity at 100°C	D 445	CSt	11,45
Viscosity at -30°C	D 5293	CP	5645
Viscosity index	D 2270		166
Flash point COC	D 92	°C	224
Pour point	D 97	°C	-45
TBN	D 2896	gKOH/kg	9,20

Volume/weight:/Art.-Nr.:

1L MN7914-1 **10L** MN7914-10 **208L** MN7914-DR
4L MN7914-4 **20L** MN7914-20 **1000L** MN7914-IBC
60L MN7914-60

7909 DIESEL TDI

Synthetic engine oil



Description:

MANNOL Diesel TDI is engineered with advanced technology to meet VW 505.01 specification. Offers advanced protection for major European diesel passenger vehicles. Provides maximum protection for today`s smaller, high RPM engines. Use in gasoline engines is possible.

Meets the requirements/specifications:

SAE 5W-30, API SN/SM/CF, ACEA C2/C3;
VW 505.01/505.00/502.00, MB 229.51, BMW LL-04,
GM dexos2, PSA PEUGEOT CITROEN B712290.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			5W-30
Density at 15°C	D 1298	kg/m³	850
Viscosity at 40°C	D 445	CSt	70,61
Viscosity at 100°C	D 445	CSt	11,78
Viscosity at -30°C	D 5293	CP	6580
Viscosity index	D 2270		163
Flash point COC	D 92	°C	224
Pour point	D 97	°C	-42
TBN	D 2896	gKOH/kg	7,40

Volume/weight:/Art.-Nr.:

1L MN7909-1 **10L** MN7909-10 **208L** MN7909-DR
5L MN7909-5 **20L** MN7909-20 **1000L** MN7909-IBC
60L MN7909-60

7511 ENERGY

HC Synthese engine oil



Description:

MANNOL Energy is a multipurpose, multigrade hydro synthetic engine oil for modern petrol and diesel engines with and without turbocharger. It is produced with the use of new and unique wear-out reducing technology. Provides high level of protection. Guarantees extreme cleanliness of engine components. Effectively reduces fuel consumption. Energy guarantees safe engine combustion at high loads, speeds and frequent temperature changes.

Meets the requirements/specifications:

SAE 5W-30, API SL, ACEA A3/B3;
MB 229.3, VW 502.00/505.00, FORD WSS-M2C913-B.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			5W-30
Density at 15°C	D 1298	kg/m³	850
Viscosity at 40°C	D 445	CSt	68,99
Viscosity at 100°C	D 445	CSt	11,50
Viscosity at -30°C	D 5293	CP	6450
Viscosity index	D 2270		162
Flash point COC	D 92	°C	224
Pour point	D 97	°C	-42
TBN	D 2896	gKOH/kg	8,24

Volume/weight:/Art.-Nr.:

1L MN7511-1 **10L** MN7511-10 **208L** MN7511-DR
4L MN7511-4 **20L** MN7511-20 **1000L** MN7511-IBC
5L MN7511-5 **60L** MN7511-60

7901 LEGEND+ESTER

Fully synthetic engine oil



Description:

MANNOL Legend+Ester is a multipurpose, multigrade fully synthetic power-saving engine oil for all types of present-day engines. Thanks to the unique bi-synthetic basis it provides instant lubrication at extremely low temperatures. Prevents start-up wear out. Provides extreme cleanness of the engine components. Guarantees maximum wear prevention at all engine functioning stages.

Meets the requirements/specifications:

SAE 0W-40, API SN/CF, ACEA A3/B3/B4;
MB 229.3/229.5, BMW Longlife-01, VW 502.00/503.01/505.00,
PORSCHE A40, OPEL GM-LL-A/B-025, SAAB,
FIAT 9.5535-M2/N2/Z2.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			0W-40
Density at 15°C	D 1298	kg/m³	830
Viscosity at 40°C	D 445	CSt	68,20
Viscosity at 100°C	D 445	CSt	12,55
Viscosity at -35°C	D 5293	CP	6120
Viscosity index	D 2270		185
Flash point COC	D 92	°C	224
Pour point	D 97	°C	-48
TBN	D 2896	gKOH/kg	10,16

Volume/weight:/Art.-Nr.:

1L MN7901-1 **10L** MN7901-10 **208L** MN7901-DR
4L MN7901-4 **20L** MN7901-20 **1000L** MN7901-IBC
60L MN7901-60

7913 ENERGY FORMULA PD

HC Synthese engine oil



Description:

MANNOL Energy Formula PD is a state of the art HC-synthesis engine oil for the latest petrol and diesel engines with pumped-jet injection systems and with exhaust emission standard EURO 4 or EURO 5. Specially developed for engines with turbocharger, direct injection, exhaust treatment and for modern engines which require oils with the ACEA C3 specification. Contains antioxidants and prevents the formation of sediments, thereby guaranteeing clean engine parts. Compatible with catalytic converter and particulate filter (DPF). Can be used for engines powered with natural gas (CNG) and liquefied petroleum gas (LPG).

Meets the requirements/specifications:

SAE 5W-40, API SN/SM/CF, ACEA C3, ACEA A3/B4;
MB 229.31/226.5, VW 502.00/505.01, BMW Longlife-04,
FORD WSS-M2C917A, GM dexos2, PORSCHE A40,
RENAULT RN0700/RN0710.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			5W-40
Density at 15°C	D 1298	kg/m³	850
Viscosity at 40°C	D 445	CSt	84,40
Viscosity at 100°C	D 445	CSt	14,00
Viscosity at -30°C	D 5293	CP	5720
Viscosity index	D 2270		171
Flash point COC	D 92	°C	226
Pour point	D 97	°C	-42
TBN	D 2896	gKOH/kg	7,22

Volume/weight:/Art.-Nr.:

1L MN7913-1 **10L** MN7913-10 **208L** MN7913-DR
5L MN7913-5 **20L** MN7913-20 **1000L** MN7913-IBC
60L MN7913-60

MANNOL®

7903 ELITE

Fully synthetic engine oil



Description:

MANNOL Elite is a premium full synthetic engine oil of the latest generation, for the lubrication of all 4-stroke gasoline and diesel engines with or without turbo. MANNOL Elite: excellent fluidity at low temperature; very low resistance at start; exceptional viscosity index; very high thermal stability.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			5W-40
Density at 15°C	D 1298	kg/m³	850
Viscosity at 40°C	D 445	CSt	80,50
Viscosity at 100°C	D 445	CSt	13,50
Viscosity at -30°C	D 5293	CP	5250
Viscosity index	D 2270		171
Flash point COC	D 92	°C	234
Pour point	D 97	°C	-42
TBN	D 2896	gKOH/kg	10,56

Meets the requirements/specifications:

SAE 5W-40, API SN/CF, ACEA A3/B4;
MB-Approval 229.5, PORSCHE A40, RENAULT RN 0700/0710, VW 502.00/505.00, JASO MA2.

Volume/weight:/Art.-Nr.:

1L MN7903-1 **10L** MN7903-10 **208L** MN7903-DR
4L MN7903-4 **20L** MN7903-20 **1000L** MN7903-IBC
5L MN7903-5 **60L** MN7903-60

7904 DIESEL TURBO

Synthetic engine oil



Description:

MANNOL Diesel Turbo is a modern engine oil of the latest generation. Suitable for modern, high output turbo diesel engines of cars, using direct fuel injection or "common rail" technology. Provides high pump ability at cold cranking. Has optimal viscosity at wide-ranging temperatures. Effectively prevents wear-out. Provides extreme cleanness of the engine components. Can be used in gasoline engines.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			5W-40
Density at 15°C	D 1298	kg/m³	850
Viscosity at 40°C	D 445	CSt	81,60
Viscosity at 100°C	D 445	CSt	13,53
Viscosity at -30°C	D 5293	CP	6210
Viscosity index	D 2270		169
Flash point COC	D 92	°C	236
Pour point	D 97	°C	-42
TBN	D 2896	gKOH/kg	10,06

Meets the requirements/specifications:

SAE 5W-40, API CI-4/SL, ACEA B4/A3;
VW 505.00/502.00.

Volume/weight:/Art.-Nr.:

1L MN7904-1 **10L** MN7904-10 **208L** MN7904-DR
5L MN7904-5 **20L** MN7904-20 **1000L** MN7904-IBC
60L MN7904-60

7915 EXTREME

Synthetic engine oil



Description:

MANNOL Extreme is a multipurpose synthetic engine oil for modern gasoline and diesel engines with and without turbocharge. Provides exceptional pump ability at cold cranking, providing safe lubrication and wear-out protection. Has optimal viscosity at wide-ranging temperatures. Satisfies the requirements of new engine types with prolonged oil-change interval.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			5W-40
Density at 15°C	D 1298	kg/m³	850
Viscosity at 40°C	D 445	CSt	79,80
Viscosity at 100°C	D 445	CSt	13,06
Viscosity at -30°C	D 5293	CP	6300
Viscosity index	D 2270		165
Flash point COC	D 92	°C	224
Pour point	D 97	°C	-38
TBN	D 2896	gKOH/kg	10,02

Meets the requirements/specifications:

SAE 5W-40, API SN/CF, ACEA A3/B4;
MB 229.3/226.5, VW 502.00/505.00, OPEL GM LL-A/B-025, RENAULT RN 0710/0700, PORSCHE A40.

Volume/weight:/Art.-Nr.:

1L MN7915-1 **10L** MN7915-10 **208L** MN7915-DR
4L MN7915-4 **20L** MN7915-20 **1000L** MN7915-IBC
5L MN7915-5 **60L** MN7915-60

7902 RACING+ESTER

Fully synthetic engine oil



Description:

MANNOL Racing+Ester is a fully synthetic motor oil for high performance gasoline and diesel engines which have been designed for high loads and speeds. A modern additive package ensures even under the most difficult conditions a reliable protection and the ideal cleanliness of all engine parts. Recommended for most charged direct injection engines. Can be used in motor sports.

Meets the requirements/specifications:

SAE 10W-60, API SN/SM/CF, ACEA A3/B3/B4.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			10W-60
Density at 15°C	D 1298	kg/m³	870
Viscosity at 40°C	D 445	CSt	160
Viscosity at 100°C	D 445	CSt	21,92
Viscosity at -25°C	D 5293	CP	6520
Viscosity index	D 2270		163
Flash point COC	D 92	°C	226
Pour point	D 97	°C	-45
TBN	D 2896	gKOH/kg	10,22

Volume/weight:/Art.-Nr.:

1L MN7902-1 **10L** MN7902-10 **208L** MN7902-DR
4L MN7902-4 **20L** MN7902-20 **1000L** MN7902-IBC
60L MN7902-60

7512 SPECIAL PLUS

HC Synthese engine oil



Description:

MANNOL Special Plus is a HC synthesis engine oil, developed for use in petrol and diesel engines. Highly resistant to ageing. It effectively reduces the formation of scale.

Meets the requirements/specifications:

SAE 10W-30, API SL/CF, ACEA A3/B3;
MB 229.1, VW 501.01/505.00.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			10W-30
Density at 15°C	D 1298	kg/m³	870
Viscosity at 40°C	D 445	CSt	69,02
Viscosity at 100°C	D 445	CSt	11,20
Viscosity at -25°C	D 5293	CP	6250
Viscosity index	D 2270		154
Flash point COC	D 92	°C	224
Pour point	D 97	°C	-40
TBN	D 2896	gKOH/kg	8,60

Volume/weight:/Art.-Nr.:

1L MN7512-1 **10L** MN7512-10 **208L** MN7512-DR
4L MN7512-4 **20L** MN7512-20 **1000L** MN7512-IBC
5L MN7512-5 **60L** MN7512-60

7501 CLASSIC

HC Synthese engine oil



Description:

MANNOL Classic is a multipurpose multigrade HC synthesis engine oil. It contains unique additives providing high anti wear-out and energy-efficient properties. It guarantees safe lubrication even at cold temperatures. It effectively prevents sludge formation. It is designed for all modern engine types: with and without turbochargers, multi-valve, with direct injection as well as gas engines.

Meets the requirements/specifications:

SAE 10W-40, API SN/CF, ACEA A3/B4;
MB-Approval 229.1, RENAULT RN0700, VW 502.00/505.00.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			10W-40
Density at 15°C	D 1298	kg/m³	870
Viscosity at 40°C	D 445	CSt	110,62
Viscosity at 100°C	D 445	CSt	16,08
Viscosity at -25°C	D 5293	CP	6665
Viscosity index	D 2270		156
Flash point COC	D 92	°C	226
Pour point	D 97	°C	-38
TBN	D 2896	gKOH/kg	10,22

Volume/weight:/Art.-Nr.:

1L MN7501-1 **10L** MN7501-10 **208L** MN7501-DR
3L MN7501-3 **20L** MN7501-20 **1000L** MN7501-IBC
4L MN7501-4 **60L** MN7501-60
5L MN7501-5
7L MN7501-7

7504 DIESEL EXTRA

Semi-synthetic engine oil



Description:

MANNOL Diesel Extra is a multigrade semi-synthetic engine oil for diesel engines of passenger cars. Has optimal low temperature characteristics and high thermal-oxidative stability. It is specially designed for engines with turbocharge. Effectively prevents from wear out and provides extreme cleanliness of engine components.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			10W-40
Density at 15°C	D 1298	kg/m³	870
Viscosity at 40°C	D 445	CSt	103,65
Viscosity at 100°C	D 445	CSt	15,60
Viscosity at -25°C	D 5293	CP	6220
Viscosity index	D 2270		159
Flash point COC	D 92	°C	226
Pour point	D 97	°C	-42
TBN	D 2896	gKOH/kg	10,06

Meets the requirements/specifications:

SAE 10W-40, API CH-4/SL, ACEA B4/A3;
VW 505.00/502.00.

Volume/weight:/Art.-Nr.:

1L MN7504-1 **10L** MN7504-10 **208L** MN7504-DR
5L MN7504-5 **20L** MN7504-20 **1000L** MN7504-IBC
7L MN7504-7 **60L** MN7504-60

7507 DEFENDER

Semi-synthetic engine oil



MANNOL Defender is a multipurpose, multigrade semi-synthetic engine oil with hydro synthetic base for modern gasoline and diesel engines with and without turbocharge. It is produced with the use of unique wear out reducing technology. It provides high degree of protection for new cars as well as for cars with above average mileage. Prolongs periods between oil change. MANNOL Defender provides safe engine combustion at high loads and frequent temperature changes.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			10W-40
Density at 15°C	D 1298	kg/m³	870
Viscosity at 40°C	D 445	CSt	94,20
Viscosity at 100°C	D 445	CSt	14,07
Viscosity at -25°C	D 5293	CP	6276
Viscosity index	D 2270		153
Flash point COC	D 92	°C	224
Pour point	D 97	°C	-42
TBN	D 2896	gKOH/kg	9,60

Meets the requirements/specifications:

SAE 10W-40, API SL, ACEA A3/B3;
MB 229.1, VW 501.01/505.00.

Volume/weight:/Art.-Nr.:

1L MN7507-1 **10L** MN7507-10 **208L** MN7507-DR
4L MN7507-4 **20L** MN7507-20 **1000L** MN7507-IBC
5L MN7507-5 **60L** MN7507-60

7509 SPECIAL

Semi-synthetic engine oil



Description:

MANNOL Special is a semi-synthetic engine oil for gasoline and diesel engines. Has high ageing resistance. Effectively reduces carbon formation and high-temperature lacquer formation. Provides safe lubrication of the engine components. Contains low-ash additives allows to prolong the endurance of the catalyst.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			10W-40
Density at 15°C	D 1298	kg/m³	870
Viscosity at 40°C	D 445	CSt	105,91
Viscosity at 100°C	D 445	CSt	15,62
Viscosity at -25°C	D 5293	CP	6150
Viscosity index	D 2270		156
Flash point COC	D 92	°C	224
Pour point	D 97	°C	-38
TBN	D 2896	gKOH/kg	6,10

Meets the requirements/specifications:

SAE 10W-40, API SG/CD;
MB 229.1, VW 501.01/505.00.

Volume/weight:/Art.-Nr.:

1L MN7509-1 **10L** MN7509-10 **208L** MN7509-DR
4L MN7509-4 **20L** MN7509-20 **1000L** MN7509-IBC
5L MN7509-5 **60L** MN7509-60

MANNOL®

7510 FAVORIT

Semi-synthetic engine oil



Description:

MANNOL Favorit is a semi-synthetic multipurpose, multigrade engine oil for modern gasoline and diesel engines with and without turbocharger. Provides safe engine lubrication at extreme loads. Prevents low temperature sediments formation thus providing optimal oil feeding to engine components. Contains low-ash additives to prolong the endurance of catalyst.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			15W-50
Density at 15°C	D 1298	kg/m³	890
Viscosity at 40°C	D 445	CSt	126,35
Viscosity at 100°C	D 445	CSt	16,51
Viscosity at -20°C	D 5293	CP	6240
Viscosity index	D 2270		140
Flash point COC	D 92	°C	224
Pour point	D 97	°C	-38
TBN	D 2896	gKOH/kg	7,18

Meets the requirements/specifications:

SAE 15W-50, API SL/CF-4, ACEA A3/B3/E2;
MB 228.1/229.1, VW 501.01/505.00, MAN 271.

Volume/weight:/Art.-Nr.:

1L MN7510-1 **10L** MN7510-10 **208L** MN7510-DR
5L MN7510-5 **20L** MN7510-20 **1000L** MN7510-IBC
60L MN7510-60

7403 STANDARD

Universal engine oil



Description:

MANNOL Standard is a multipurpose, multigrade engine oil with highly purified mineral basis for highly augmented gasoline and diesel engines with and without turbocharger. Has good detergent-dispersing and antioxygenic properties. Contains low-ash additives to prolong the endurance of catalyst. Provides safe engine burn in tough usage conditions.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			15W-40
Density at 15°C	D 1298	kg/m³	890
Viscosity at 40°C	D 445	CSt	102,0
Viscosity at 100°C	D 445	CSt	14,40
Viscosity at -20°C	D 5293	CP	5200
Viscosity index	D 2270		145
Flash point COC	D 92	°C	220
Pour point	D 97	°C	-38
TBN	D 2896	gKOH/kg	5,89

Meets the requirements/specifications:

SAE 15W-40, API SL/CF.

Volume/weight:/Art.-Nr.:

1L MN7403-1 **10L** MN7403-10 **208L** MN7403-DR
4L MN7403-4 **20L** MN7403-20 **1000L** MN7403-IBC
5L MN7403-5 **60L** MN7403-60

7402 DIESEL

Universal engine oil



Description:

MANNOL Diesel is a multigrade engine oil with mineral basis for highly augmented diesel engines of passenger cars and trucks with turbocharger. Perfectly balanced additives effectively protect from wear out and prevent corrosion. Reduces soot and carbon formation. Provides safe lubrication and engine cleanness at any usage conditions.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			15W-40
Density at 15°C	D 1298	kg/m³	890
Viscosity at 40°C	D 445	CSt	109,0
Viscosity at 100°C	D 445	CSt	14,40
Viscosity at -20°C	D 5293	CP	6805
Viscosity index	D 2270		135
Flash point COC	D 92	°C	224
Pour point	D 97	°C	-33
TBN	D 2896	gKOH/kg	8,40

Meets the requirements/specifications:

SAE 15W-40, API CG-4/SL, ACEA E3/B3/A3;
MAN M 3275, MB 228.3/229.1, MTU DDC Type 2,
VOLVO VDS, VW 505.00/501.01.

Volume/weight:/Art.-Nr.:

1L MN7402-1 **10L** MN7402-10 **208L** MN7402-DR
5L MN7402-5 **20L** MN7402-20 **1000L** MN7402-IBC
7L MN7402-7 **60L** MN7402-60

7405 UNIVERSAL

Universal engine oil



Description:

MANNOL Universal is a multipurpose, multigrade engine oil with highly purified mineral basis for modern gasoline and diesel engines. Has good detergent-dispersing properties. Provides safe lubrication and cleanliness of engine components.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			15W-40
Density at 15°C	D 1298	kg/m³	890
Viscosity at 40°C	D 445	CSt	105,5
Viscosity at 100°C	D 445	CSt	13,91
Viscosity at -20°C	D 5293	CP	6368
Viscosity index	D 2270		132
Flash point COC	D 92	°C	226
Pour point	D 97	°C	-28
TBN	D 2896	gKOH/kg	4,88

Meets the requirements/specifications:

SAE 15W-40, API SG/CD.

Volume/weight:/Art.-Nr.:

1L MN7405-1 **10L** MN7405-10 **208L** MN7405-DR
3L MN7405-3 **20L** MN7405-20 **1000L** MN7405-IBC
4L MN7405-4 **60L** MN7405-60
5L MN7405-5

7404 SAFARI

Universal engine oil



Description:

MANNOL Safari is a multigrade engine oil with highly purified mineral basis for highly accelerated gasoline and diesel engines with and without turbocharger, used in tough conditions. Contains low-ash additives to prolong the endurance of the catalyst. Has stable viscosity during the whole used period. Guarantees safe engine combustion at extreme loads.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			20W-50
Density at 15°C	D 1298	kg/m³	890
Viscosity at 40°C	D 445	CSt	168,64
Viscosity at 100°C	D 445	CSt	18,37
Viscosity at -15°C	D 5293	CP	8640
Viscosity index	D 2270		121
Flash point COC	D 92	°C	240
Pour point	D 97	°C	-33
TBN	D 2896	gKOH/kg	6,20

Meets the requirements/specifications:

SAE 20W-50, API SL.

Volume/weight:/Art.-Nr.:

1L MN7404-1 **10L** MN7404-10 **208L** MN7404-DR
3L MN7404-3 **20L** MN7404-20 **1000L** MN7404-IBC
4L MN7404-4 **60L** MN7404-60
5L MN7404-5
7L MN7404-7

MANNOL®



7701 O.E.M.

Fully synthetic engine oil



Description:

MANNOL 7701 O.E.M. is energy saving fully synthetic motor oil specially designed to be used in modern petrol and diesel engines for Opel, Chevrolet, Daewoo, GM and Saab. A low ash level additive (MID SAPS) ensures reliable operation of the diesel particulate filter (DPF) and catalytic converters of gasoline engines (CAT). Effectively protects against wear and provide an exceptional clarity of details. Recommended for engines that meets GM dexos2 and earlier specifications of GM LL A025/B025 oil standard. Designed to meet the requirements for operations in hard conditions and long maintenance intervals.

Meets the requirements/specifications:

SAE 5W-30, API SN/SM/CF, ACEA C2/C3;
GM dexos2.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			5W-30
Density at 15°C	D 1298	kg/m³	850
Viscosity at 40°C	D 445	CSt	64,14
Viscosity at 100°C	D 445	CSt	11,14
Viscosity at -30°C	D 5293	CP	5237
Viscosity index	D 2270		167
Flash point COC	D 92	°C	222
Pour point	D 97	°C	-42
TBN	D 2896	gKOH/kg	7,46

Volume/weight:/Art.-Nr.:

1L MN7701-1 **10L** MN7701-10 **208L** MN7701-DR
4L MN7701-4 **20L** MN7701-20 **1000L** MN7701-IBC
60L MN7701-60 **1L** metal MN7701-1ME
4L metal MN7701-4ME

7702 O.E.M.

Semi-synthetic engine oil



Description:

MANNOL 7702 O.E.M. is a semi-synthetic engine oil specially designed to be used in petrol and diesel engines for Daewoo, Opel, Chevrolet, GM and Saab. Effectively protects against wear and provides additional protection for engines in cars involved in stop-and-go driving and in heavy traffic. Designed to meet requirements for operations in hard conditions.

Meets the requirements/specifications:

SAE 10W-40, ACEA A3/B3, API SL/CF;
VW 501.00/505.00, MB 229.1, CHEVROLET, OPEL, DAEWOO, GM, SAAB.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			10W-40
Density at 15°C	D 1298	kg/m³	870
Viscosity at 40°C	D 445	CSt	111,11
Viscosity at 100°C	D 445	CSt	15,75
Viscosity at -25°C	D 5293	CP	6796
Viscosity index	D 2270		150
Flash point COC	D 92	°C	226
Pour point	D 97	°C	-40
TBN	D 2896	gKOH/kg	8,26

Volume/weight:/Art.-Nr.:

1L MN7702-1 **10L** MN7702-10 **208L** MN7702-DR
4L MN7702-4 **20L** MN7702-20 **1000L** MN7702-IBC
60L MN7702-60 **1L** metal MN7702-1ME
4L metal MN7702-4ME

7703 O.E.M.

Fully synthetic engine oil



Description:

MANNOL 7703 O.E.M. is a fully synthetic motor oil of the latest generation, specially designed for use in all gasoline and diesel engines for Peugeot and Citroen vehicles. Modern additives with low ash level (LOW SAPS), ensures optimal environment protection system, also provide reliable operation of diesel particular filter (FAP, DPF). Effectively protects against wear and provide an exceptional clarity of details. Recommended for all modern petrol and diesel engines, including those engines which meets EURO 5 environmental standards.

Meets the requirements/specifications:

SAE 5W-30, API SN/SM/CF, ACEA A5/B5, ACEA C2;
PSA B71 2290, PEUGEOT, CITROEN.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			5W-30
Density at 15°C	D 1298	kg/m³	850
Viscosity at 40°C	D 445	CSt	62,90
Viscosity at 100°C	D 445	CSt	11,02
Viscosity at -30°C	D 5293	CP	5250
Viscosity index	D 2270		170
Flash point COC	D 92	°C	222
Pour point	D 97	°C	-42
TBN	D 2896	gKOH/kg	7,32

Volume/weight:/Art.-Nr.:

1L MN7703-1 **10L** MN7703-10 **208L** MN7703-DR
4L MN7703-4 **20L** MN7703-20 **1000L** MN7703-IBC
60L MN7703-60 **1L** metal MN7703-1ME
4L metal MN7703-4ME

7705 O.E.M.

Fully synthetic engine oil



Description:

MANNOL 7705 O.E.M. is a fully synthetic motor oil specially designed to be used in petrol and diesel engines for Renault, Nissan vehicles. Effectively protects against wear and provide an exceptional clarity of details. Designed to meet the requirements of Renault, Nissan and Infiniti for operations in hard conditions and long maintenance intervals.

Meets the requirements/specifications:

SAE 5W-40, API SN, ACEA A3/B4;
MB 229.3, PORSCHE A40, VW 502.00/505.00,
OPEL GM-LL-A025/GM-LL-B025, RENAULT RN 0700/0710,
NISSAN/INFINITI.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			5W-40
Density at 15°C	D 1298	kg/m³	850
Viscosity at 40°C	D 445	CSt	72,20
Viscosity at 100°C	D 445	CSt	13,40
Viscosity at -30°C	D 5293	CP	6100
Viscosity index	D 2270		173
Flash point COC	D 92	°C	228
Pour point	D 97	°C	-42
TBN	D 2896	gKOH/kg	10,06

Volume/weight:/Art.-Nr.:

1L MN7705-1 **10L** MN7705-10 **208L** MN7705-DR
4L MN7705-4 **20L** MN7705-20 **1000L** MN7705-IBC
60L MN7705-60 **1L** metal MN7705-1ME
4L metal MN7705-4ME

7706 O.E.M.

Fully synthetic engine oil



Description:

MANNOL 7706 O.E.M. is a sfully synthetic motor oil suitable for use in modern automotive petrol and diesel engines with DPF where the manufacturer recommends an ACEA C4 lubricant. Keeps the engine's most sensitive parts clean thanks to its advanced detergent and dispersive additives. Ensures easy cold starts and fuel economy due to its extreme fluidity.

Meets the requirements/specifications:

SAE 5W-30, ACEA C4;
RENAULT RN 0720, MB 226.51/229.51.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			5W-30
Density at 15°C	D 1298	kg/m³	850
Viscosity at 40°C	D 445	CSt	71,60
Viscosity at 100°C	D 445	CSt	12,30
Viscosity at -30°C	D 5293	CP	5879
Viscosity index	D 2270		171
Flash point COC	D 92	°C	222
Pour point	D 97	°C	-42
TBN	D 2896	gKOH/kg	7,80

Volume/weight:/Art.-Nr.:

1L MN7706-1 **10L** MN7706-10 **208L** MN7706-DR
5L MN7706-5 **20L** MN7706-20 **1000L** MN7706-IBC
60L MN7706-60 **1L** metal MN7706-1ME
5L metal MN7706-5ME

7707 O.E.M.

Fully synthetic engine oil



Description:

MANNOL 7707 O.E.M. is a fully synthetic high-performance, fuel economy engine oil for Ford and Volvo gasoline and diesel engines. Suitable for new technology engines, requiring fuel economy lubricants with standards ACEA A5/B5. Keeps the engine's most sensitive parts clean thanks to its advanced detergent and dispersive additives. Easy cold starts and fuel economies due to its extreme fluidity.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			5W-30
Density at 15°C	D 1298	kg/m³	850
Viscosity at 40°C	D 445	CSt	66,40
Viscosity at 100°C	D 445	CSt	11,40
Viscosity at -30°C	D 5293	CP	4250
Viscosity index	D 2270		166
Flash point COC	D 92	°C	224
Pour point	D 97	°C	-45
TBN	D 2896	gKOH/kg	9,80

Meets the requirements/specifications:

SAE 5W-30, API SN, ACEA A5/B5, ILSAC GF-4;
FORD WSS-M2C913-D, OPEL GM-LL-A025/GM-LL-B025.

Volume/weight:/Art.-Nr.:

1L MN7707-1 **10L** MN7707-10 **208L** MN7707-DR
4L MN7707-4 **20L** MN7707-20 **1000L** MN7707-IBC
5L MN7707-5 **60L** MN7707-60 **1L metal** MN7707-1ME
5L metal MN7707-5ME

7709 O.E.M.

Fully synthetic engine oil



Description:

MANNOL 7709 O.E.M. is a modern fully synthetic engine oil specially designed for use in Toyota and Lexus cars, as well as for minivans and SUV's. Best suited for up-to-date diesel and gasoline engines, with multi-valve technology VVT-i, with and without turbocharging. The combination of unconventional base oils together with the latest additive technology guarantees a motor oil that provides exceptional protection against wear and keeps the engine clean in all operating conditions.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			5W-30
Density at 15°C	D 1298	kg/m³	850
Viscosity at 40°C	D 445	CSt	65,20
Viscosity at 100°C	D 445	CSt	11,32
Viscosity at -30°C	D 5293	CP	5420
Viscosity index	D 2270		168
Flash point COC	D 92	°C	222
Pour point	D 97	°C	-42
TBN	D 2896	gKOH/kg	10,22

Meets the requirements/specifications:

SAE 5W-30, API SN/CF, ACEA C2/C3, ACEA A5/B5;
TOYOTA, LEXUS.

Volume/weight:/Art.-Nr.:

1L MN7709-1 **10L** MN7709-10 **208L** MN7709-DR
4L MN7709-4 **20L** MN7709-20 **1000L** MN7709-IBC
60L MN7709-60 **1L metal** MN7709-1ME
4L metal MN7709-4ME

7711 O.E.M.

Fully synthetic engine oil



Description:

MANNOL 7711 O.E.M. is a fully synthetic engine oil specially designed to use in modern petrol and diesel engines for Daewoo, UZ-Daewoo and GM. Effectively protects against wear and provide an exceptional clarity of details. Designed to meet the requirements for operations in hard conditions and long maintenance intervals.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			5W-40
Density at 15°C	D 1298	kg/m³	850
Viscosity at 40°C	D 445	CSt	78,20
Viscosity at 100°C	D 445	CSt	13,40
Viscosity at -30°C	D 5293	CP	6250
Viscosity index	D 2270		175
Flash point COC	D 92	°C	222
Pour point	D 97	°C	-40
TBN	D 2896	gKOH/kg	10,10

Meets the requirements/specifications:

SAE 5W-40, API SN, ACEA A3/B4;
MB 229.3, PORSCHE A40, VW 502.00/505.00, PORSCHE 040, OPEL GM-LL-A/B-025, RENAULT RN 0700/0710, DAEWOO, UZ-DAEWOO, GM.

Volume/weight:/Art.-Nr.:

1L MN7711-1 **10L** MN7711-10 **208L** MN7711-DR
4L MN7711-4 **20L** MN7711-20 **1000L** MN7711-IBC
60L MN7711-60 **1L metal** MN7711-1ME
4L metal MN7711-4ME

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7715 O.E.M.

Fully synthetic engine oil



Description:

MANNOL 7715 O.E.M. is a fully synthetic engine oil of the new generation, specially developed for use in all petrol and diesel engines from Volkswagen, Audi, Skoda, Seat. The high-tech additive package (LOW SAPS – low content of sulphur, ash and phosphorus) ensures optimal operation of the environmental protection systems as well as of diesel particulate filters (DPF). Recommended for all modern petrol and diesel engines, among these such meeting the environmental standards Euro 4 und Euro 5. Can be used in all engines that require the use of oil meeting the VW norms 502.00./505.00./505.01./503.00./ 503.01/506.00./506.01.

Meets the requirements/specifications:

SAE 5W-30, API SN/CF, ACEA C3;
BMW Longlife-04, MB 229.51, PORSCHE C30,
VW 504.00/507.00/502.00/505.00/503.01/506.00/505.01*/506.01**
* Except VW-PDU-Motors without LongLife-Service (WIV).
** Except V-10-PDU-Motors in Phaeton until February 2006 and R5-PDU-Motors in Touareg until December 2006.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			5W-30
Density at 15°C	D 1298	kg/m³	850
Viscosity at 40°C	D 445	CSt	68,00
Viscosity at 100°C	D 445	CSt	11,40
Viscosity at -30°C	D 5293	CP	6580
Viscosity index	D 2270		162
Flash point COC	D 92	°C	224
Pour point	D 97	°C	-42
TBN	D 2896	gKOH/kg	7,58

Volume/weight:/Art.-Nr.:

1L MN7715-1
5L MN7715-5
10L MN7715-10
20L MN7715-20
60L MN7715-60
208L MN7715-DR
1000L MN7715-IBC
1L metal MN7715-1ME
5L metal MN7715-5ME

7717 O.E.M.

Fully synthetic engine oil



Description:

MANNOL 7717 O.E.M. is fully synthetic engine oil of the new generation, specially developed for use in petrol and diesel engines from MERCEDES-BENZ. The high tech additive package (low SAPS – low content of sulphur, ash and phosphorus) ensures optimal operation of the environmental protection systems as well as of diesel particulate filters (DPF).

Meets the requirements/specifications:

SAE 0W-30, API SN/CF, ACEA C2/C3;
MB 229.31/229.51/229.52, BMW LL-04, VW 504.00/507.00, PORSCHE C30, FORD WSS-M2C950-A, GM dexos2.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			0W-30
Density at 15°C	D 1298	kg/m³	830
Viscosity at 40°C	D 445	CSt	65.20
Viscosity at 100°C	D 445	CSt	11,83
Viscosity at -35°C	D 5293	CP	6150
Viscosity index	D 2270		179
Flash point COC	D 92	°C	224
Pour point	D 97	°C	-47
TBN	D 2896	gKOH/kg	8,51

Volume/weight:/Art.-Nr.:

10L MN7717-10
20L MN7717-20
60L MN7717-60
208L MN7717-DR
1000L MN7717-IBC
1L metal MN7717-1ME
4L metal MN7717-4ME

7719 O.E.M.

Fully synthetic engine oil



Description:

MANNOL 7719 O.E.M. is fully synthetic engine oil of the new generation, specially developed for use in petrol and diesel engines from BMW and MINI. The high tech additive package (low SAPS – low content of sulphur, ash and phosphorus) ensures optimal operation of the environmental protection systems as well as of diesel particulate filters (DPF).

Meets the requirements/specifications:

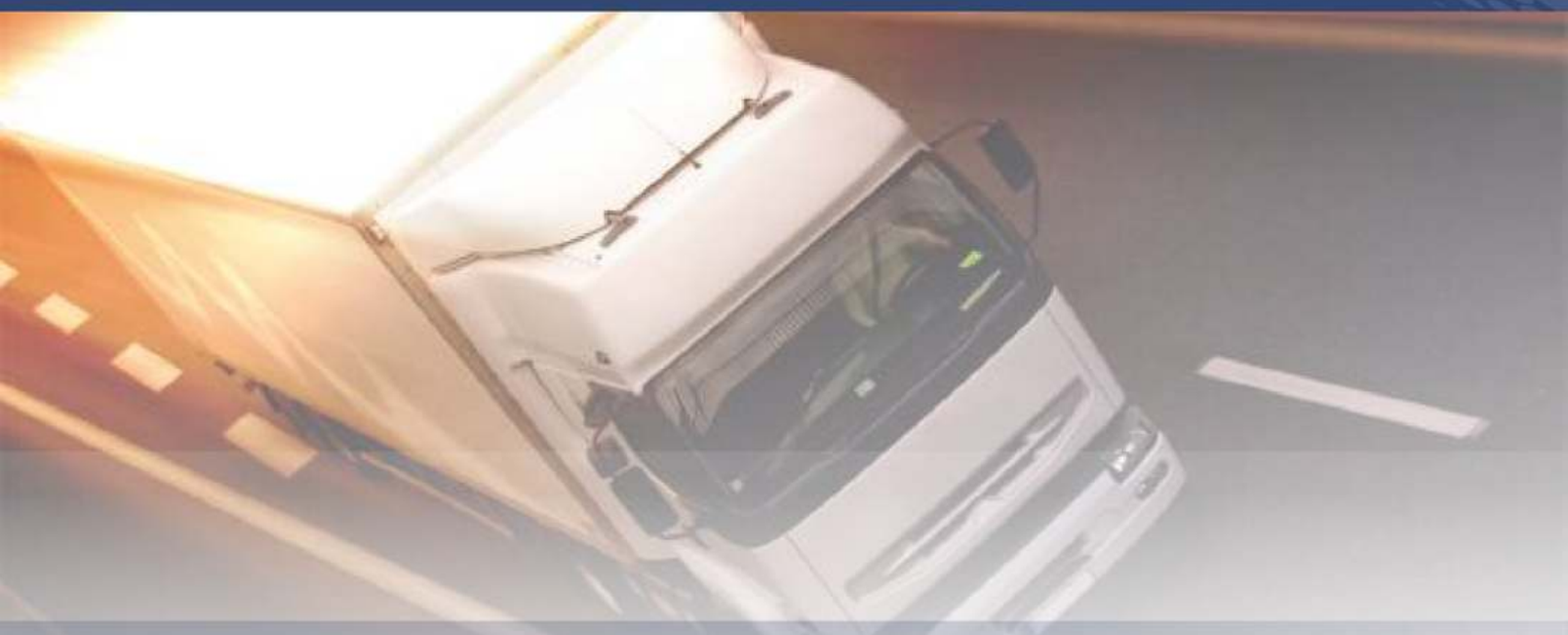
SAE 0W-40, API SN/CF, ACEA C3;
BMW LL-04, MB 229.31/229.51, PORSCHE A40, GM dexos2,
VW 502.00/505.00, OPEL GM-LL-A025/GM-LL-B025,
FORD WSS-M2C937-A, FIAT 9.55535-S2.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			0W-40
Density at 15°C	D 1298	kg/m³	830
Viscosity at 40°C	D 445	CSt	72,21
Viscosity at 100°C	D 445	CSt	12,77
Viscosity at -35°C	D 5293	CP	5968
Viscosity index	D 2270		178
Flash point COC	D 92	°C	224
Pour point	D 97	°C	-45
TBN	D 2896	gKOH/kg	8,10

Volume/weight:/Art.-Nr.:

10L MN7719-10
20L MN7719-20
60L MN7719-60
208L MN7719-DR
1000L MN7719-IBC
1L metal MN7719-1ME
4L metal MN7719-4ME



7101 TS-1 SHPD

Universal truck engine oil



Description:

MANNOL TS-1 SHPD is a special Super High Performance Diesel high quality engine oil with mineral basis for Heavy Goods Vehicles (HGV's), busses and other high load equipment. Provides safe engine combustion at extreme loads and perfect protection from the components wear out and corrosion. Thanks to low congelation temperature provides easy cold cranking. Good detergent and dispersive properties provide perfect cleanness and safe lubrication of the engine components. Prolongs the interval between oil changes (according to the producer's instructions).

Meets the requirements/specifications:

SAE 15W-40, API CH-4/SL, ACEA E3/A3/B3/B4;
MB 228.3/229.1, MAN M 3275, VOLVO VDS-2,
MTU DDC Type 2.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			15W-40
Density at 15°C	D 1298	kg/m³	890
Viscosity at 40°C	D 445	CSt	108,47
Viscosity at 100°C	D 445	CSt	14,65
Viscosity at -25°C	D 5293	CP	6250
Viscosity index	D 2270		139
Flash point COC	D 92	°C	230
Pour point	D 97	°C	-33
TBN	D 2896	gKOH/kg	8,20

Volume/weight:/Art.-Nr.:

5L MN7101-5 **10L** MN7101-10 **208L** MN7101-DR
20L MN7101-20 **1000L** MN7101-IBC
60L MN7101-60

7102 TS-2 SHPD

Universal truck engine oil



Description:

MANNOL TS-2 SHPD is a special Super High Performance Diesel multigrade engine oil of highest quality with mineral basis and additives providing optimal wear protection at every engine combustion step. Is produced for use in diesel engines of trucks, buses, etc. Has good antioxygenic and dispersive properties. Provides the cleanliness of engine components and prolongs interval between oil changes (according to the producer's instructions).

Meets the requirements/specifications:

SAE 20W-50, API CH-4/SL, ACEA E3/A3/B3/B4;
MB 228.3/229.1, MAN M 3275, VOLVO VDS-2,
MTU DDC Type 2.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			20W-50
Density at 15°C	D 1298	kg/m³	890
Viscosity at 40°C	D 445	CSt	155,85
Viscosity at 100°C	D 445	CSt	17,81
Viscosity at -15°C	D 5293	CP	8650
Viscosity index	D 2270		126
Flash point COC	D 92	°C	230
Pour point	D 97	°C	-30
TBN	D 2896	gKOH/kg	8,70

Volume/weight:/Art.-Nr.:

5L MN7102-5 **10L** MN7102-10 **208L** MN7102-DR
20L MN7102-20 **1000L** MN7102-IBC
60L MN7102-60

7103 TS-3 SHPD

Universal truck engine oil



Description:

MANNOL TS-3 SHPD is a special Super High Performance Diesel engine oil with the mineral basis of highest quality for trucks and buses used at extreme loads. Thanks to thoroughly selected additives provides perfect wear out and deterioration protection at increased engine speed, high loads and at wide temperature range. Outstanding low-temperature properties guarantee easy cold cranking and high pump efficiency. Reduces oil and fuel consumption. Provides the cleanliness of the engine components during the whole operational life.

Meets the requirements/specifications:

SAE 10W-40, API CH-4/SL, ACEA E3/A3/B3/B4; MB 228.3/229.1, MAN M 3275, VOLVO VDS-2, MTU DDC Type 2.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			10W-40
Density at 15°C	D 1298	kg/m³	870
Viscosity at 40°C	D 445	CSt	110,60
Viscosity at 100°C	D 445	CSt	14,42
Viscosity at -25°C	D 5293	CP	7000
Viscosity index	D 2270		133
Flash point COC	D 92	°C	226
Pour point	D 97	°C	-40
TBN	D 2896	gKOH/kg	8,26

Volume/weight:/Art.-Nr.:

10L MN7103-10 **208L** MN7103-DR
20L MN7103-20 **1000L** MN7103-IBC
60L MN7103-60

7104 TS-4 SHPD

Universal truck engine oil



Description:

MANNOL TS-4 SHPD is a special high quality Super High Performance Diesel engine oil with mineral basis for heavily loaded trucks' and regular buses' diesels. Provides safe engine combustion at extreme loads and perfect protection from the components wear-out and corrosion. Thanks to special additives has low congelation temperature and provides easy cold cranking. Good detergent and dispersive properties provide perfect cleanness and safe lubrication of the engine components.

Meets the requirements/specifications:

SAE 15W-40, API CI-4/CH-4/CG-4/CF-4/SL, ACEA E7/A3/B4; JASO DH-1, VOLVO VDS-3, MAN M 3275, MB-Approval 228.3, MTU DDC Type 2, MACK EO-N/EO-M Plus, RENAULT RLD-2, CUMMINS CES 20076/77/78, CATERPILLAR ECF-2/ECF-1-a, GLOBAL DHD-1, DETROIT DIESEL PGOS 93K215, DEUTZ DQC-III.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			15W-40
Density at 15°C	D 1298	kg/m³	890
Viscosity at 40°C	D 445	CSt	104,60
Viscosity at 100°C	D 445	CSt	14,26
Viscosity at -20°C	D 5293	CP	6420
Viscosity index	D 2270		138
Flash point COC	D 92	°C	226
Pour point	D 97	°C	-38
TBN	D 2896	gKOH/kg	10,44

Volume/weight:/Art.-Nr.:

5L MN7104-5 **10L** MN7104-10 **208L** MN7104-DR
20L MN7104-20 **1000L** MN7104-IBC
60L MN7104-60

7105 TS-5 UHPD

Semi-synthetic truck engine oil



Description:

MANNOL TS-5 UHPD is a semi-synthetic Ultra High Performance Diesel engine oils that satisfies strictest standards for lorry producers. Synthetic components provide high performance properties. Has optimal low-temperature characteristics. Provides stable viscosity at wide-ranging temperatures. Safely protects the engine components from wear out and tearing either at cold cranking or at high temperatures. Provides efficient engine combustion.

Meets the requirements/specifications:

SAE 10W-40, API CI-4/CH-4/CG-4/CF-4/SL, ACEA E7/A3/B4; JASO DH-1, VOLVO VDS-3, MAN M 3275, MB-Approval 228.3, MTU DDCType 2, MACK EO-N/EO-M Plus, RENAULT RLD-2, CUMMINS CES 20076/77/78, CATERPILLAR ECF-2/ECF-1-a, DETROIT DIESEL PGOS 93K215, DEUTZ DQC-III, GLOBAL DHD-1.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			10W-40
Density at 15°C	D 1298	kg/m³	870
Viscosity at 40°C	D 445	CSt	94,05
Viscosity at 100°C	D 445	CSt	14,23
Viscosity at -25°C	D 5293	CP	5266
Viscosity index	D 2270		156
Flash point COC	D 92	°C	224
Pour point	D 97	°C	-45
TBN	D 2896	gKOH/kg	10,86

Volume/weight:/Art.-Nr.:

5L MN7105-5 **10L** MN7105-10 **208L** MN7105-DR
20L MN7105-20 **1000L** MN7105-IBC
60L MN7105-60

7106 TS-6 UHPD ECO

Synthetic truck engine oil



Description:

MANNOL TS-6 UHPD Eco is a synthetically-based Ultra High Performance Diesel engine oil that satisfies the strictest standards of the truck producers. Thanks to its unique consistence has perfect viscosity-temperature properties that guarantee easy cranking at extremely low temperatures and safe protection from wear-out at high loads and temperatures. Effectively reduces the frictional heating. Significantly prolongs the interval between oil changes. Has good detergent and dispersive properties providing perfect cleanness of the engine components. Provides efficient engine combustion.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			10W-40
Density at 15°C	D 1298	kg/m³	870
Viscosity at 40°C	D 445	CSt	85,20
Viscosity at 100°C	D 445	CSt	13,02
Viscosity at -25°C	D 5293	CP	6800
Viscosity index	D 2270		153
Flash point COC	D 92	°C	224
Pour point	D 97	°C	-46
TBN	D 2896	gKOH/kg	12,76

Meets the requirements/specifications:

SAE 10W-40, ACEA E4/E7, API CI-4/SL;
MB-Approval 228.5, VOLVO VDS 3, MAN M 3277/M 3377,
MTU DDC Type 3, CUMMINS CES 20078,
RENAULT RXD/RLD-2, DEUTZ IV-10, MACK EO-N/OE-M Plus,
DETROIT DIESEL PGOS 93K215, GLOBAL DHD-1.

Volume/weight:/Art.-Nr.:

10L MN7106-10 **208L** MN7106-DR
20L MN7106-20 **1000L** MN7106-IBC
60L MN7106-60

7107 TS-7 UHPD BLUE

Synthetic truck engine oil



Description:

MANNOL TS-7 UHPD Blue is a synthetically-based Ultra High Performance Diesel engine oil that satisfies strictest standards of the truck producers. Thanks to its unique consistence has perfect viscosity-temperature properties that guarantee easy cranking at extremely low temperatures and safe protection from wear out at high loads and temperatures. Effectively reduces frictional heating. Significantly prolongs interval between oil changes (according to the producer's instructions).

Product Characteristics:

Test	Method	Unit	Result
SAE-class			10W-40
Density at 15°C	D 1298	kg/m³	870
Viscosity at 40°C	D 445	CSt	83,94
Viscosity at 100°C	D 445	CSt	13,27
Viscosity at -25°C	D 5293	CP	5297
Viscosity index	D 2270		160
Flash point COC	D 92	°C	224
Pour point	D 97	°C	-42
TBN	D 2896	gKOH/kg	10,20

Meets the requirements/specifications:

SAE 10W-40, ACEA E9/E7/E6/E4, API CJ-4/CI-4;
CATERPILLAR ECF-1-a, CUMMINS CES 20076/77,
DEUTZ DQC III-10 LA/IV-10 LA, MAN M 3477/M 3575/M 3271-1,
MB-Approval 228.51, MACK EO-O Premium Plus,
MTU DDC Type 3.1, RENAULT RLD-2/RLD-3, VOLVO VDS-4.

Volume/weight:/Art.-Nr.:

10L MN7107-10 **208L** MN7107-DR
20L MN7107-20 **1000L** MN7107-IBC
60L MN7107-60

7108 TS-8 UHPD SUPER

Fully synthetic truck engine oil



Description:

MANNOL TS-8 UHPD Super is fully synthetic Ultra High Performance Diesel engine oil that satisfies strictest standards of the truck producers. Thanks to its unique consistence has perfect viscosity-temperature properties that guarantee easy cranking at extremely low temperatures and safe protection from wear at high loads and temperatures. Effectively reduces frictional heating. Significantly prolongs interval between oil changes. Has good detergent and dispersive properties providing perfect cleanliness of engine components and ageing resistance.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			5W-30
Density at 15°C	D 1298	kg/m³	850
Viscosity at 40°C	D 445	CSt	77,20
Viscosity at 100°C	D 445	CSt	11,98
Viscosity at -30°C	D 5293	CP	6580
Viscosity index	D 2270		150
Flash point COC	D 92	°C	224
Pour point	D 97	°C	-45
TBN	D 2896	gKOH/kg	12,54

Meets the requirements/specifications:

SAE 5W-30, ACEA E4/E7;
MB-Approval 228.5, DEUTZ DQC IV-10, MTU DDC Type 3.

Volume/weight:/Art.-Nr.:

10L MN7108-10 **208L** MN7108-DR
20L MN7108-20 **1000L** MN7108-IBC
60L MN7108-60

7109 TS-9 UHPD NANO

Semi-synthetic truck engine oil



Description:

MANNOL TS-9 UHPD Nano is a semi-synthetic Ultra High Performance Diesel engine oil with remarkable tribological properties. Uses the excellent properties of specially selected nano-additives to minimize friction on working metal surfaces by the coating and bearing effect. MANNOL TS-9 UHPD Nano was designed to reduce fuel consumption and increase the life of motors as well as reduction of friction. Intended for truck fleet operators, seeking the best available lubricating oil technology, in order to meet the increasingly stringent emission limits that are imposed on diesel engines in Europe.

Meets the requirements/specifications:

SAE 10W-40, API CI-4/SL, ACEA E7;
VOLVO VDS-3, MAN M 3275, MB 228.3, MTU DDC Type 2, MACK EO-N/EO-M Plus, RENAULT RLD-2, GLOBAL DHD-1, CUMMINS CES 20076/77/78, CATERPILLAR ECF-2, DEUTZ DQC III-10.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			10W-40
Density at 15°C	D 1298	kg/m³	870
Viscosity at 40°C	D 445	CSt	100,0
Viscosity at 100°C	D 445	CSt	14,20
Viscosity at -25°C	D 5293	CP	7000
Viscosity index	D 2270		145
Flash point COC	D 92	°C	226
Pour point	D 97	°C	-42
TBN	D 2896	gKOH/kg	10,67

Volume/weight:/Art.-Nr.:

10L MN7109-10 **208L** MN7109-DR
20L MN7109-20 **1000L** MN7109-IBC
60L MN7109-60

7111 TS-11 GEO

Natural Gas Truck Engine Oil



Description:

MANNOL TS-11 Geo is engine oil specifically formulated for gas engines and has superb performance properties. Designed to meet the requirements of today's modern four-stroke engines, formulated to provide reliable protection for trucks and buses which runs on compressed (CNG), liquefied (LNG) natural gas or liquefied petroleum gas (LPG). MANNOL TS-11 uses high quality base oils and an advanced additive system with low sulphated ash, which deliver exceptional thermal, oxidation stability and nitration resistance. MANNOL TS-11 is balanced to provide perfect anti-wear protection characteristics.

Meets the requirements/specifications:

SAE 15W-40;
CUMMINS CES 20074, DETROIT DIESEL PGOS 93K216.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			15W-40
Density at 15°C	D 1298	kg/m³	890
Viscosity at 40°C	D 445	CSt	121,75
Viscosity at 100°C	D 445	CSt	15,80
Viscosity at -20°C	D 5293	CP	6574
Viscosity index	D 2270		137
Flash point COC	D 92	°C	222
Pour point	D 97	°C	-35
TBN	D 2896	gKOH/kg	4,82

Volume/weight:/Art.-Nr.:

10L MN7111-10 **208L** MN7111-DR
20L MN7111-20 **1000L** MN7111-IBC
60L MN7111-60

7112 TS-12 SHPD

Semi-synthetic truck engine oil



Description:

MANNOL TS-12 SHPD is high performance diesel engine oil designed for optimum lubrication under heavy operating conditions. The high-quality additive package reduces soot entry and acid related seal aging due to low diesel quality. Protects against oil thickening, high temperature deposits, sludge formation, oil degradation and corrosion. Excellent low temperature fluidity and high temperature viscosity allows the use in most diesel applications.

Meets the requirements/specifications:

SAE 10W-30, API CG-4/CF-4/CF/SL;
MB 228.3/229.1, MTU DDC Type 2, MACK EO-L, VOLVO VDS-2, MAN M 3275.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			10W-30
Density at 15°C	D 1298	kg/m³	867
Viscosity at 40°C	D 445	CSt	70,74
Viscosity at 100°C	D 445	CSt	11,04
Viscosity at -25°C	D 5293	CP	5326
Viscosity index	D 2270		147
Flash point COC	D 92	°C	224
Pour point	D 97	°C	-38
TBN	D 2896	gKOH/kg	12,10

Volume/weight:/Art.-Nr.:

10L MN7112-10 **208L** MN7112-DR
20L MN7112-20 **1000L** MN7112-IBC
60L MN7112-60

7114 TS-14 UHPD

Synthetic truck engine oil



Description:

MANNOL TS-14 UHPD is a synthetic oil designed for use in utility vehicles with diesel engines. It distinguishes itself by extended oil change intervals, a continuous anti-wear protection, less emissions as well as less deposits. Thanks to the unique additive technology this low SAPS oil complies with the specifications ACEA E9, API CJ-4, Mercedes-Benz 228.31 and Volvo VDS-4.

Meets the requirements/specifications:

SAE 15W-40, API CJ-4/SN, ACEA E7/E9;
JASO DH-2, MB 228.31, MAN M 3575, VOLVO VDS-4,
MACK EO-O Prem. Plus, RENAULT RLD-3,
CUMMINS CES 20081, DETROIT DIESEL PGOS 93K218,
CATERPILLAR ECF-3, DEUTZ DQC III-10 LA,
MTU DDC Type 2.1, SCANIA Low Ash.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			15W-40
Density at 15°C	D 1298	kg/m³	870
Viscosity at 40°C	D 445	CSt	102,20
Viscosity at 100°C	D 445	CSt	14,26
Viscosity at -20°C	D 5293	CP	5250
Viscosity index	D 2270		142
Flash point COC	D 92	°C	226
Pour point	D 97	°C	-40
TBN	D 2896	gKOH/kg	9,82

Volume/weight:/Art.-Nr.:

10L MN7114-10 **208L** MN7114-DR
20L MN7114-20 **1000L** MN7114-IBC
60L MN7114-60

7115 TS-15 SHPD

Universal truck engine oil



Description:

MANNOL TS-15 SHPD is a special high-quality Super High Performance Diesel engine oil on a mineral basis for heavily loaded diesels of lorries and regular buses. Provides safe engine combustion at extreme loads and perfect protection from wear out and corrosion. Thanks to special additives it has a low congelation temperature and provides easy cold cranking. Good detergent and dispersive properties provide perfect cleanliness and safe lubrication of the engine components.

Meets the requirements/specifications:

SAE 20W-50, API CI-4/CH-4/CG-4/CF-4/SL, ACEA E7/A3/B4;
JASO DH-1, MB 228.3, MAN M 3275, MTU DDC Type 2,
VOLVO VDS-3, MACK EO-N/EO-M Plus, RENAULT RLD-2,
CUMMINS CES 20076/77/78, CATERPILLAR ECF-2/ECF-1-a,
GLOBAL DHD-1, DETROIT DIESEL PGOS 93K215,
DEUTZ DQC-III.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			20W-50
Density at 15°C	D 1298	kg/m³	890
Viscosity at 40°C	D 445	CSt	161,88
Viscosity at 100°C	D 445	CSt	19,06
Viscosity at -15°C	D 5293	CP	6131
Viscosity index	D 2270		133
Flash point COC	D 92	°C	230
Pour point	D 97	°C	-35
TBN	D 2896	gKOH/kg	10,43

Volume/weight:/Art.-Nr.:

10L MN7115-10 **208L** MN7115-DR
20L MN7115-20 **1000L** MN7115-IBC
60L MN7115-60

7117 TS-17 UHPD BLUE

Fully synthetic truck engine oil



Description:

MANNOL TS-17 UHPD Blue is a fully synthetic engine oil, developed for highly loaded diesel engines with turbochargers which are operated under heavy conditions, which comply with the standards Euro 3, 4, 5 and Euro 6 and which are equipped with diesel particle filters (DPF), three-way catalytic converters (SCR) as well as special afterburning systems (EGR). Recommended for use in European, American and Japanese diesel engines of the latest generation which run on low-sulphur fuel.

Meets the requirements/specifications:

SAE 5W-30, ACEA E6/E7;
MB-Approval 228.51, MAN M 3677, SCANIA Low Ash.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			5W-30
Density at 15°C	D 1298	kg/m³	850
Viscosity at 40°C	D 445	CSt	69,20
Viscosity at 100°C	D 445	CSt	11,66
Viscosity at -30°C	D 5293	CP	6350
Viscosity index	D 2270		164
Flash point COC	D 92	°C	224
Pour point	D 97	°C	-40
TBN	D 2896	gKOH/kg	10,40

Volume/weight:/Art.-Nr.:

10L MN7117-10 **208L** MN7117-DR
20L MN7117-20 **1000L** MN7117-IBC
60L MN7117-60

7118 TS-18 SHPD

Synthetic truck engine oil



Description:

MANNOL TS-18 SHPD is a synthetic SHPD engine oil for use in heavily loaded trucks. It meets drainage requirements of leading truck manufacturers and contains a special additive package that ensures excellent piston cleanliness and effective wear protection. Applicable in engines with or without diesel particulate filter (DPF) and in most engines with exhaust gas recirculation (EGR) and selective catalytic reduction (SCR) systems. Suitable for Euro I, II, III, IV, V, VI* engines.

Meets the requirements/specifications:

SAE 15W-40, API CK-4/SN, ACEA E9/E7;
MB 228.31, MAN M 3275/M 3575, VOLVO VDS-4.5,
RENAULT RLD-4, FORD WSS-M2C171-F1, MACK EOS-4.5,
MTU DDC Type 2.1, CATERPILLAR ECF-3,
CUMMINS CES 20086, DEUTZ DQC III-10LA,
DETROIT DIESEL DFS 93K222.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			15W-40
Density at 15°C	D 1298	kg/m³	870
Viscosity at 40°C	D 445	CSt	85,61
Viscosity at 100°C	D 445	CSt	14,65
Viscosity at -20°C	D 5293	CP	1620
Viscosity index	D 2270		179
Flash point COC	D 92	°C	226
Pour point	D 97	°C	-40
TBN	D 2896	gKOH/kg	10,29

Volume/weight:/Art.-Nr.:

10L MN7118-10 **208L** MN7118-DR
20L MN7118-20 **1000L** MN7118-IBC
60L MN7118-60

7120 TS-20 SHPD

Synthetic truck engine oil



Description:

MANNOL TS-20 is a SHPD engine oil on a synthetic basis for use in heavily loaded trucks. Thanks to its unique consistence it has perfect viscosity-temperature properties that guarantee easy cranking at extremely low temperatures and safe protection from wear-out at high loads and temperatures.

Meets the requirements/specifications:

SAE 10W-30, ACEA E9/E7, API CJ-4/SN;
MB 228.31, MAN M 3575, VOLVO VDS-4, RENAULT RLD-3,
MACK EO-O Prem. Plus/EO-M Plus,
CUMMINS CES 20076/-78/-81, CATERPILLAR ECF-2/ECF-3,
DEUTZ DQC III-10-LA, DETROIT DIESEL PGOS 93K218,
MTU DDC Type 2.1.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			10W-30
Density at 15°C	D 1298	kg/m³	850
Viscosity at 40°C	D 445	CSt	72,37
Viscosity at 100°C	D 445	CSt	11,9
Viscosity at -25°C	D 5293	CP	4014
Viscosity index	D 2270		162
Flash point COC	D 92	°C	224
Pour point	D 97	°C	-39
TBN	D 2896	gKOH/kg	10,09

Volume/weight:/Art.-Nr.:

10L MN7120-10 **208L** MN7120-DR
20L MN7120-20 **1000L** MN7120-IBC
60L MN7120-60

AdBlue®

Diesel fuel additives



Description:

AdBlue® is a high-purity 32,5 % w/w urea solution which is used as an additional working fluid in diesel cars and trucks equipped with SCR technology (Selective Catalytic Reduction). The composition of AdBlue® is specified in DIN 70070. The use of such systems optimises engine performance, reduces the emission of harmful particles in exhaust gases and complies with the environmental standards Euro 4, Euro 5 and Euro 6. AdBlue® is a registered trademark of the German Association of the Automotive Industry (VDA Verband der Automobilindustrie e.V.).

Meets the requirements/specifications:

ISO 22241-1/-2/-3, DIN 70070.

Volume/weight:/Art.-Nr.:

10L AD3001-10 **1000L** AD3001-IBC
20L AD3001-20

MANNOL®



7832 POWERBIKE 4-TAKT

Ester blend 4-stroke engine oil



Description:

MANNOL Powerbike 4-Takt is a modern four-stroke engine oil with Ester components for motorbikes, pit bikes, enduro and trial bikes. Provides optimum cold starts, maximum resistance at high temperatures and maximum shear stability. Usable in bikes with injection engines and catalytic converters, quads (ATVs), scooters etc.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			15W-50
Density at 15°C	D 1298	kg/m³	890
Viscosity at 40°C	D 445	CSt	140,13
Viscosity at 100°C	D 445	CSt	17,21
Viscosity at -20°C	D 5293	CP	6950
Viscosity index	D 2270		134
Flash point COC	D 92	°C	228
Pour point	D 97	°C	-30
TBN	D 2896	gKOH/kg	7,14

Meets the requirements/specifications:

SAE 15W-50, API SM, JASO MA/MA2;
DUCATI, KAWASAKI, YAMAHA, SUZUKI, HONDA.

Volume/weight:/Art.-Nr.:

10L MN7832-10
20L MN7832-20
60L MN7832-60
208L MN7832-DR
1000L MN7832-IBC
1L metal MN7832-1ME

7812 MOTORBIKE 4-TAKT

Ester blend 4-stroke engine oil



Description:

MANNOL Motorbike 4-Takt is a modern four-stroke engine oil with Ester components for motorbikes, pit bikes, enduro and trial bikes. Provides optimum cold-start characteristics, maximum resistance at high temperatures and maximum shear stability. Ideal for bikes with injection engines and catalytic converters. Usable also in quads (ATVs), scooters etc.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			10W-40
Density at 15°C	D 1298	kg/m³	860
Viscosity at 40°C	D 445	CSt	90,20
Viscosity at 100°C	D 445	CSt	13,70
Viscosity at -25°C	D 5293	CP	5620
Viscosity index	D 2270		154
Flash point COC	D 92	°C	226
Pour point	D 97	°C	-42
TBN	D 2896	gKOH/kg	6,20

Meets the requirements/specifications:

SAE 10W-40, API SL, JASO MA/MA2;
KAWASAKI, YAMAHA, SUZUKI, HONDA, HUSABERG.

Volume/weight:/Art.-Nr.:

4L MN7812-4
10L MN7812-10
20L MN7812-20
60L MN7812-60
208L MN7812-DR
1000L MN7812-IBC
1L metal MN7812-1ME
4L metal MN7812-4ME

7830 MOTORBIKE 4-TAKT HD

Universal 4-stroke engine oil



Description:

MANNOL Motorbike 4-Takt HD is a universal engine oil, designed for four-stroke engines (including two-cylinder V engines) of motorcycles with air or liquid cooling, with integrated and non-integrated gearbox.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			20W-50
Density at 15°C	D 1298	kg/m³	890
Viscosity at 40°C	D 445	CSt	148
Viscosity at 100°C	D 445	CSt	16,80
Viscosity at -25°C	D 5293	CP	8850
Viscosity index	D 2270		122
Flash point COC	D 92	°C	228
Pour point	D 97	°C	-30
TBN	D 2896	gKOH/kg	5,86

Meets the requirements/specifications:

SAE 20W-50, API SL, JASO MA/MA2.

Volume/weight:/Art.-Nr.:

1L MN7830-1 **10L** MN7830-10 **208L** MN7830-DR
20L MN7830-20 **1000L** MN7830-IBC
60L MN7830-60

7807 QUAD 4-TAKT RACING

Synthetic 4-stroke engine oil



Description:

MANNOL Quad 4-Takt Racing is the Engine oil for four-stroke engines of street, sport and work ATV (quads) with air or water cooling. A modern additive package ensures stable lubrication system operation of heavily loaded ATV engines. The viscous high-quality oil provides maximum protection against wear and ensures clean engine parts. Meets the requirements of JASO MA2. This guarantees a smooth and clear dome operation. Suitable for engines which meet the Euro 2 or Euro 3 standard. Compatible with all exhaust treatment systems.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			10W-40
Density at 15°C	D 1298	kg/m³	870
Viscosity at 40°C	D 445	CSt	89,40
Viscosity at 100°C	D 445	CSt	13,40
Viscosity at -25°C	D 5293	CP	5850
Viscosity index	D 2270		150
Flash point COC	D 92	°C	226
Pour point	D 97	°C	-38
TBN	D 2896	gKOH/kg	5,74

Meets the requirements/specifications:

SAE 10W-40, API SL/CF, JASO MA/MA2;
YAMAHA, CFMOTO, HONDA, SUZUKI, KAWASAKI, POLARIS, JOHN DEERE, BRP ROTAX, KYMCO, ARCTIC CAT.

Volume/weight:/Art.-Nr.:

10L MN7807-10 **208L** MN7807-DR
20L MN7807-20 **1000L** MN7807-IBC
60L MN7807-60 **1L** metal MN7807-1ME

7820 AQUA JET 4-TAKT

4-stroke engine oil



Description:

MANNOL Aqua Jet 4-Takt is a special oil for four-stroke jet ski engines with or without turbochargers. A modern additive package ensures a stable operation of the heavily loaded water jet drive lubrication system. Excellent corrosion inhibitors prevent from corrosion caused by sea water and salt spray. The viscous high quality oil provides maximum protection against wear and ensures clean engine parts. Compatible with all kinds of catalysts.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			10W-40
Density at 15°C	D 1298	kg/m³	870
Viscosity at 40°C	D 445	CSt	88,80
Viscosity at 100°C	D 445	CSt	13,61
Viscosity at -25°C	D 5293	CP	5718
Viscosity index	D 2270		156
Flash point COC	D 92	°C	224
Pour point	D 97	°C	-35
TBN	D 2896	gKOH/kg	7,42

Meets the requirements/specifications:

SAE 10W-40, API SL, NMMA FC-W, JASO MA;
SEA-DOO, KAWASAKI, YAMAHA, SUZUKI, HONDA, BRP ROTAX, POLARIS.

Volume/weight:/Art.-Nr.:

10L MN7820-10 **208L** MN7820-DR
20L MN7820-20 **1000L** MN7820-IBC
60L MN7820-60 **1L** metal MN7820-1ME

7202 4-TAKT PLUS

Semi-synthetic engine oil



Description:

MANNOL 4-Takt Plus is a highly effective, semi synthetic oil that is designed for lubrication of four-stroke engines in modern motorcycles, quad bikes, scooters and other similar vehicles with wet clutches. The special package of synthetic components ensures an optimal clutch functionality and prevents slippage. Provides maximum wear protection and prevents scuffing of cylinder walls. Ensures an easy cold start.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			10W-40
Density at 15°C	D 1298	kg/m³	870
Viscosity at 40°C	D 445	CSt	87,76
Viscosity at 100°C	D 445	CSt	13,30
Viscosity at -25°C	D 5293	CP	5820
Viscosity index	D 2270		152
Flash point COC	D 92	°C	222
Pour point	D 97	°C	-38
TBN	D 2896	gKOH/kg	6,10

Meets the requirements/specifications:

SAE 10W-40, API SL, JASO MA/MA2.

Volume/weight:/Art.-Nr.:

1L MN7202-1 **10L** MN7202-10 **208L** MN7202-DR
4L MN7202-4 **20L** MN7202-20 **1000L** MN7202-IBC
60L MN7202-60

7209 4-TAKT PREMIUM

Premium 4-stroke engine oil



Description:

MANNOL 4-Takt Premium is engine oil for motorbikes with mid-size four-stroke air and liquid-cooled engines of latest generation. Protects against valve train wear. Please refer to OE service manual for drain interval for specific vehicle types.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			20W-40
Density at 15°C	D 1298	kg/m³	890
Viscosity at 40°C	D 445	CSt	115,31
Viscosity at 100°C	D 445	CSt	14,50
Viscosity at -15°C	D 5293	CP	3965
Viscosity index	D 2270		127
Flash point COC	D 92	°C	228
Pour point	D 97	°C	-35
TBN	D 2896	gKOH/kg	6,20

Meets the requirements/specifications:

SAE 20W-40, API SM, JASO MA2.

Volume/weight:/Art.-Nr.:

1L MN7209-1 **10L** MN7209-10 **208L** MN7209-DR
20L MN7209-20 **1000L** MN7209-IBC
60L MN7209-60

7203 4-TAKT AGRO

Universal engine oil



Description:

MANNOL 4-Takt Agro is a high quality engine oil for four-stroke engines of minitractors, mowers, generators, cultivators, power pumps and other garden equipment with air- and liquid cooling. Special additives guarantee good lubricating, anti-wear and detergent-dispersive properties thus increasing the motor capacity of agricultural aggregates. Can be combined with all fuel types: blended and non-blended gasoline, diesel oil. The intervals between the engine oil changes should be observed.

Product Characteristics:

Test	Method	Unit	Result
Density at 15°C	D 1298	kg/m³	890
Viscosity at 40°C	D 445	CSt	11,40
Viscosity at 100°C	D 445	CSt	101,98
Viscosity index	D 2270		98
Flash point COC	D 92	°C	220
Pour point	D 97	°C	-25

Meets the requirements/specifications:

SAE 30, API SG, JASO MA/MA2.

Volume/weight:/Art.-Nr.:

1L MN7203-1 **10L** MN7203-10 **208L** MN7203-DR
4L MN7203-4 **20L** MN7203-20 **1000L** MN7203-IBC
60L MN7203-60 **0,6L** metal MN7203-06ME

7805 SCOOTER 2-TAKT PREMIUM

2-stroke engine oil



Description:

MANNOL Scooter 2-Takt Premium is a modern universal two stroke engine oil for scooters, mopeds and other scooter types. Aspects taken into special account during its development were the high demands placed on scooters in daily use with frequent cold starts and high operating temperatures. Reduces combustion residues. For pre-mix and separate lubrication.

Product Characteristics:

Test	Method	Unit	Result
Density at 15°C	D 1298	kg/m³	854
Viscosity at 40°C	D 445	CSt	43,46
Viscosity at 100°C	D 445	CSt	8,10
Viscosity index	D 2270		162
Flash point COC	D 92	°C	106
Pour point	D 97	°C	-40
TBN	D 2896	gKOH/kg	1,64

Meets the requirements/specifications:

API TC+, JASO FD, GLOBAL ISO-L-EGD, TISI;
HONDA, SUZUKI, YAMAHA, VESPA, GILERA.

Volume/weight:/Art.-Nr.:

500ml MN7805-05 **10L** MN7805-10 **208L** MN7805-DR
20L MN7805-20 **1000L** MN7805-IBC
60L MN7805-60 **1L metal** MN7805-05ME

7804 SCOOTER 2-TAKT

Universal engine oil



Description:

MANNOL Scooter 2-Takt is a modern universal two-stroke engine oil for scooters, mopeds and other scooter types. Aspects taken into special account during its development were the high demands placed on scooters in daily use with frequent cold starts and high operating temperatures. Reduces combustion residues. For pre-mix and separate lubrication.

Product Characteristics:

Test	Method	Unit	Result
Density at 15°C	D 1298	kg/m³	850
Viscosity at 40°C	D 445	CSt	86,89
Viscosity at 100°C	D 445	CSt	10,36
Viscosity index	D 2270		101
Flash point COC	D 92	°C	156
Pour point	D 97	°C	-32
TBN	D 2896	gKOH/kg	1,12

Meets the requirements/specifications:

API TC, JASO FB, GLOBAL ISO-L-EGB;
HONDA, SUZUKI, YAMAHA, VESPA, GILERA.

Volume/weight:/Art.-Nr.:

500ml MN7804-05 **10L** MN7804-10 **208L** MN7804-DR
20L MN7804-20 **1000L** MN7804-IBC
60L MN7804-60 **1L metal** MN7804-1ME

7201 2-TAKT SNOWPOWER

Synthetic 2-stroke engine oil



Description:

MANNOL 2-Takt Plus is a high performance semi synthetic oil for lubrication of two-stroke engines of modern motorcycles, bikes and other moto vehicles with air cooling. Synthetic components provide maximum wear-out protection and prevent cylinder walls tearing at extreme engine loads. Blends well with fuel even at low temperatures. Reduces smoke formation to a minimum. The recommended proportion for mixing is 1:50 (check the vehicle producer's recommendations). Can be used in motorsports. Can be used for lubrication of two-stroke engines with water cooling.

Product Characteristics:

Test	Method	Unit	Result
Density at 15°C	D 1298	kg/m³	880
Viscosity at 40°C	D 445	CSt	50,17
Viscosity at 100°C	D 445	CSt	8,12
Viscosity index	D 2270		133
Flash point COC	D 92	°C	106
Pour point	D 97	°C	-42
TBN	D 2896	gKOH/kg	1,44

Meets the requirements/specifications:

API TC+, JASO FD, ISO-L-EGD;
ROTAX 253 Snowmobile, BOMBARDIER, SKI-DOO, LYNX, ARCTIC CAT, POLARIS, YAMAHA.

Volume/weight:/Art.-Nr.:

1L MN7201-1 **4L** MN7201-4 **10L** MN7201-10 **20L** MN7201-20 **60L** MN7201-60 **208L** MN7201-DR **1000L** MN7201-IBC

7204 2-TAKT PLUS

Semi-synthetic engine oil



Description:

MANNOL 2-Takt Plus is a high performance semi synthetic oil for lubrication of two-stroke engines of modern motorcycles, bikes and other moto vehicles with air cooling. Synthetic components provide maximum wear-out protection and prevent cylinder walls tearing at extreme engine loads. Blends well with fuel even at low temperatures. Reduces smoke formation to a minimum. The recommended proportion for mixing is 1:50 (check the vehicle producer's recommendations). Can be used in motorsports. Can be used for lubrication of two-stroke engines with water cooling.

Product Characteristics:

Test	Method	Unit	Result
Density at 15°C	D 1298	kg/m³	850
Viscosity at 40°C	D 445	CSt	50,12
Viscosity at 100°C	D 445	CSt	8,14
Viscosity index	D 2270		134,0
Flash point COC	D 92	°C	108
Pour point	D 97	°C	-42
TBN	D 2896	gKOH/kg	1,84

Meets the requirements/specifications:

JASO FD, API TC, ISO-L-EGD, TISI;
HUSQVARNA 242 Chainsaw.

Volume/weight:/Art.-Nr.:

1L MN7204-1 **10L** MN7204-10 **208L** MN7204-DR
4L MN7204-4 **20L** MN7204-20 **1000L** MN7204-IBC
60L MN7204-60

7205 2-TAKT UNIVERSAL

Universal engine oil



Description:

MANNOL 2-Takt Universal is a high performance engine oil with mineral basis for two-stroke engines with air cooling where separate lubrication system or direct mixing with fuel is used. Has good anti-wear properties. To select the right proportion, follow the vehicle producers' instructions.

Product Characteristics:

Test	Method	Unit	Result
Density at 15°C	D 1298	kg/m³	880
Viscosity at 40°C	D 445	CSt	76,20
Viscosity at 100°C	D 445	CSt	9,66
Viscosity index	D 2270		105
Flash point COC	D 92	°C	154
Pour point	D 97	°C	-32
TBN	D 2896	gKOH/kg	1,02

Meets the requirements/specifications:

API TC, ISO L-EGB, JASO FB.

Volume/weight:/Art.-Nr.:

1L MN7205-1 **10L** MN7205-10 **208L** MN7205-DR
4L MN7205-4 **20L** MN7205-20 **1000L** MN7205-IBC
60L MN7205-60

7818 OUTBOARD 2-TAKT PREMIUM

Outboard 2-stroke engine oil



Description:

MANNOL Outboard 2-Takt Premium is a high-performance two-stroke engine oil based on synthetic base oil with a special additive package for optimum lubricity and excellent corrosion protection. It was specially designed for water cooled outboard engines with separate or mixed lubrication. It meets the requirements of API TC and NMMA TC-W3. It is recommended for use in two-stroke outboard engines of Tohatsu, Mercury, Suzuki, Evinrude, Johnson, Mariner, Seagull, Selva and Yamaha.

Product Characteristics:

Test	Method	Unit	Result
Density at 15°C	D 1298	kg/m³	850
Viscosity at 40°C	D 445	CSt	54,93
Viscosity at 100°C	D 445	CSt	8,96
Viscosity index	D 2270		142
Flash point COC	D 92	°C	102
Pour point	D 97	°C	-42
TBN	D 2896	gKOH/kg	5,43

Meets the requirements/specifications:

API TC, NMMA TC-W3;
TOHATSU, MERCURY, SUZUKI, EVINRUDE, JOHNSON,
MARINER, SEAGULL, SELVA, YAMAHA.

Volume/weight:/Art.-Nr.:

10L MN7818-10 **208L** MN7818-DR
20L MN7818-20 **1000L** MN7818-IBC
60L MN7818-60 **1L** metal MN7818-1ME

7207 OUTBOARD MARINE

Outboard 2-stroke engine oil



Description:

MANNOL Outboard Marine is a high performance engine oil for two-stroke engines with water cooling. Can be used in boat outboards, water scooters. Can also be used in two-stroke engines using oils of API TD or NMMA TC-W3 standards. Provides good anti-corrosive protection. To select the right proportion, follow the vehicle producers' instructions.

Product Characteristics:

Test	Method	Unit	Result
Density at 15°C	D 1298	kg/m³	850
Viscosity at 40°C	D 445	CSt	54,93
Viscosity at 100°C	D 445	CSt	8,96
Viscosity index	D 2270		142
Flash point COC	D 92	°C	102
Pour point	D 97	°C	-39

Meets the requirements/specifications:

API TD, NMMA TC-W3.

Volume/weight:/Art.-Nr.:

1L MN7207-1 **10L** MN7207-10 **208L** MN7207-DR
4L MN7207-4 **20L** MN7207-20 **1000L** MN7207-IBC
60L MN7207-60

7208 OUTBOARD UNIVERSAL

Outboard 2-stroke engine oil



Description:

MANNOL Outboard Universal is a two-stroke oil for all water-cooled engines. Specially recommended for outboard engines, water scooters, jet-ski, etc. Also recommended for two-stroke engines requiring an oil from NMMA TC-W2 level. Ensures high protection against rust and corrosion. Always follow the fuel ratios recommended by the constructor (typical ratio: 1:50)

Product Characteristics:

Test	Method	Unit	Result
Density at 15°C	D 1298	kg/m³	880
Viscosity at 40°C	D 445	CSt	79,74
Viscosity at 100°C	D 445	CSt	10,21
Viscosity index	D 2270		109
Flash point COC	D 92	°C	158
Pour point	D 97	°C	-27
TBN	D 2896	gKOH/kg	1,26

Meets the requirements/specifications:

API TC, NMMA TC-W2.

Volume/weight:/Art.-Nr.:

1L MN7208-1 **10L** MN7208-10 **208L** MN7208-DR
4L MN7208-4 **20L** MN7208-20 **1000L** MN7208-IBC
60L MN7208-60

7206 AGRO

Universal engine oil



Description:

MANNOL Agro is a high quality engine oil for two-stroke engines of minitractors, mowers, trimmers, cultivators, chain and circular saws, special equipment for forestry and other garden equipment where separate lubrication system or direct mixing with fuel is used. Ashless additives provide high burn-out degree and significantly increase the motor capacity of agricultural aggregates. To select the right proportion, follow the vehicle producers' instructions.

Product Characteristics:

Test	Method	Unit	Result
Density at 15°C	D 1298	kg/m³	883
Viscosity at 40°C	D 445	CSt	79,54
Viscosity at 100°C	D 445	CSt	10,17
Viscosity index	D 2270		109
Flash point COC	D 92	°C	158
Pour point	D 97	°C	-30
TBN	D 2896	gKOH/kg	1,12

Meets the requirements/specifications:

API TC, JASO FB.

Volume/weight:/Art.-Nr.:

1L MN7206-1 **10L** MN7206-10 **208L** MN7206-DR
20L MN7206-20 **1000L** MN7206-IBC
60L MN7206-60

7858 AGRO FORMULA S

Chainsaw engine oil



Description:

MANNOL Agro Formula S is a special engine oil for use in all kinds of two-stroke engines: mowers, trimmers, cultivators, chain and circular saws, special equipment for forestry and construction equipment.

Product Characteristics:

Test	Method	Unit	Result
Density at 15°C	D 1298	kg/m³	850
Viscosity at 40°C	D 445	CSt	82,28
Viscosity at 100°C	D 445	CSt	10,49
Viscosity index	D 2270		110
Flash point COC	D 92	°C	158
Pour point	D 97	°C	-33
TBN	D 2896	gKOH/kg	1,18

Meets the requirements/specifications:

API TC, JASO FB, 2-stroke engines;
ISO L-EGB.

Volume/weight:/Art.-Nr.:

100ml MN7858-01 **10L** MN7858-10 **208L** MN7858-DR
500ml MN7858-05 **20L** MN7858-20 **1000L** MN7858-IBC
1L MN7858-1 **60L** MN7858-60 **1L** dosator MN7858-1DS

7859 AGRO HSQ

Chainsaw engine oil



Description:

MANNOL Agro HSQ is a high-performance two-stroke engine oil, suitable for separate or mixed lubrication of chainsaws and other garden equipment. Excellent lubrication and combustion properties. Always follow the fuel ratios recommended by the constructor.

Product Characteristics:

Test	Method	Unit	Result
Density at 15°C	D 1298	kg/m³	850
Viscosity at 40°C	D 445	CSt	80,20
Viscosity at 100°C	D 445	CSt	10,35
Viscosity index	D 2270		112
Flash point COC	D 92	°C	152
Pour point	D 97	°C	-32
TBN	D 2896	gKOH/kg	1,16

Meets the requirements/specifications:

API TC, JASO FB, 2-stroke engines.

Volume/weight:/Art.-Nr.:

100ml MN7859-01 **10L** MN7859-10 **208L** MN7859-DR
500ml MN7859-05 **20L** MN7859-20 **1000L** MN7859-IBC
1L MN7859-1 **60L** MN7859-60 **1L** dosator MN7859-1DS



8218 O.E.M.

Automatic transmission fluid



Description:

MANNOL 8218 O.E.M. is automatic transmission fluid for many passenger cars and light commercial vehicles as well as the most automatic transmissions from Asia manufacturers. Improved friction characteristics ensure smooth shifting and excellent shifting comfort at low temperatures.

Meets the requirements/specifications:

AISIN WARNER JWS 3309, JASO M315 Type 1A, JATCO ATF, JATCO 3100 PL085, TOYOTA ATF Type T/T-II/T-III/T-IV, NISSAN/INFINITI MATIC D/J/K, NISSAN/TEXACO N402 (JATCO FWD), MITSUBISHI DIAMOND SP-II, SP-III, MAZDA ATF-M III, ATF-MV, DAIHATSU ALUMIX ATF MULTI, HONDA ATF-Z1 (NOT FOR CVT)/ATF DW-1, SUZUKI 3314, 3317, 2384K, SUZUKI ATF OIL /ATF OIL SPECIAL, SUBARU ATF, ATF-HP, HYUNDAI/KIA SP-II, SP-III, IDEMITSU K17-JAGUAR X Type 2001-2005, MOPAR AS68RC, GM DEXRON II/IID/IIE/IIIF/IIIG/IIIH, CHRYSLER ATF +3/+4, VW/AUDI G-052-025-A2/G-052-162-A1/G-052-990 A1/A2/G-055-025 A1/A2, BMW 7045E (3 SERIES)/ETL-8072B (5 SERIE /LA2634, LT71141 (ZF 5 SPEED), MERCEDES-BENZ 236.1/2/3/5/6/7/9/10/11, PORSCHE JWS 3309, VOLVO 97340/97341, VOITH 55.6335.XX (G607), ALLISON C-4 ZF TE-ML 03D/04D/11B/14A/14B/16L/17, FORD MERCON V FNR5, MAN 339F/V1/V2/Z1/Z2.

Product Characteristics:

Test	Method	Unit	Result
Density at 15°C	D 1298	kg/m³	850
Dynamic Viscosity by Brookfield	D 2983	CP	17500
Viscosity at 40°C	D 445	CSt	38,29
Viscosity at 100°C	D 445	CSt	8,01
Viscosity index	D 2270		189
Flash point COC	D 92	°C	216
Pour point	D 97	°C	-48

Volume/weight:/Art.-Nr.:

10L MN8218-10
20L MN8218-20
60L MN8218-60
208L MN8218-DR
1000L MN8218-IBC
4L metal MN8218-4ME

8217 O.E.M.

Automatic transmission fluid



Description:

MANNOL 8217 O.E.M. is a synthetic transmission fluid for automatic transmissions from Toyota. Thoroughly selected additives and synthetic components provide the best friction properties during gear changing.

Meets the requirements/specifications:

TOYOTA/LEXUS/SCION ATF WS Lifetime/08886-02303/08886-02305/08886-80803/08886-80807/08886-81210, AISIN WARNER NWS-9638/9638 T5, AISIN WARNER JWS-3324, GM 88863400/401 4 and 5 speed European (BMW/MB/VW), CHRYSLER ATF +3/4, VOITCH ATs 55.6335, MAN 339 Type Z-1.

Product Characteristics:

Test	Method	Unit	Result
Density at 15°C	D 1298	kg/m³	850
Dynamic Viscosity by Brookfield	D 2983	CP	10200
Viscosity at 40°C	D 445	CSt	28,39
Viscosity at 100°C	D 445	CSt	5,86
Viscosity index	D 2270		156
Flash point COC	D 92	°C	216
Pour point	D 97	°C	-50

Volume/weight:/Art.-Nr.:

10L MN8217-10
20L MN8217-20
60L MN8217-60
208L MN8217-DR
1000L MN8217-IBC
4L metal MN8217-4ME

8216 O.E.M.

Automatic transmission fluid



Description:

MANNOL 8216 O.E.M. is a synthetically based transmission fluid for automatic transmissions with variable speed. Special additives reduce energy loss due to friction, remove heat from rubbing surfaces, thus preventing them from wear out.

Meets the requirements/specifications:

VW/AUDI G 052-180 (TL 521 80), BMW CVT EZL 799A (83220429154), MB 236.20, MINI COOPER EZL 799A, FORD CVT WSS M2C928-A/M2C933-A, FORD CVT FLUID 23/30/MERCON C, MOPAR CVTF +4, CHRYSLER/ JEEP CVT FLUID NS-2, GM/SATURN DEX-CVT, HYUNDAI/KIA SP-III, DAIHATSU AMIX CVT FLUID DC, HONDA HMMF (08260-99904)/HCF-2, MITSUBISHI DIAQUEEN CVT FLUID J1/J4/CVT ATF SP-III, TOYOTA CVT FLUID TC/CVT FLUID FE, NISSAN CVT FLUID NS-1/NS-2 (KLE52-00004) (not for KTF-1)/NS-3, SUBARU CVT OIL for LINEARTRONIC (K0425Y0710), SUZUKI SCVT FLUID/CVT OIL/CVT FLUID GREEN 1/NS-2/GREEN 2, MAZDA CVT FLUID JWS 3320, SUBARU i-CVT FLUID / i-CVT FLUID FG.

Product Characteristics:

Test	Method	Unit	Result
Density at 15°C	D 1298	kg/m³	850
Dynamic Viscosity by Brookfield	D 2983	CP	19000
Viscosity at 40°C	D 445	CSt	39,01
Viscosity at 100°C	D 445	CSt	7,20
Viscosity index	D 2270		150
Flash point COC	D 92	°C	210
Pour point	D 97	°C	-45

Volume/weight:/Art.-Nr.:

10L MN8216-10
20L MN8216-20
60L MN8216-60
208L MN8216-DR
1000L MN8216-IBC
4L metal MN8216-4ME

8209 O.E.M.

Automatic transmission fluid



Description:

MANNOL 8209 O.E.M. is all year-round fluid of the highest quality, developed for use in automatic transmissions from Mitsubishi, Kia, Hyundai, for which car manufacturers prescribe the use of ATF SP-III fluids.

Meets the requirements/specifications:

HYUNDAI ATF SP-III, KIA ATF-SP-III, MITSUBISHI ATF SP3.

Product Characteristics:

Test	Method	Unit	Result
Density at 15°C	D 1298	kg/m³	850
Dynamic Viscosity by Brookfield	D 2983	CP	18200
Viscosity at 40°C	D 445	CSt	35,60
Viscosity at 100°C	D 445	CSt	7,40
Viscosity index	D 2270		180
Flash point COC	D 92	°C	216
Pour point	D 97	°C	-48

Volume/weight:/Art.-Nr.:

1L MN8209-1
4L MN8209-4
10L MN8209-10
20L MN8209-20
60L MN8209-60
208L MN8209-DR
1000L MN8209-IBC
4L metal MN8209-4ME

8208 O.E.M.

Automatic transmission fluid



Description:

MANNOL 8208 O.E.M. is a universal fluid of the highest quality, developed for use in automatic transmissions from Toyota/Lexus, for which car manufacturers prescribe the use of Toyota Type T-IV fluids.

Meets the requirements/specifications:

TOYOTA ATF Type T-IV.

Product Characteristics:

Test	Method	Unit	Result
Density at 15°C	D 1298	kg/m³	850
Viscosity at 40°C	D 445	CSt	36,56
Viscosity at 100°C	D 445	CSt	7,38
Viscosity index	D 2270		173
Flash point COC	D 92	°C	210
Pour point	D 97	°C	-48

Volume/weight:/Art.-Nr.:

10L MN8208-10
20L MN8208-20
60L MN8208-60
208L MN8208-DR
1000L MN8208-IBC
1L metal MN8208-1ME
4L metal MN8208-4ME

8207 DEXRON VI

Automatic transmission fluid



Description:

MANNOL Dexron VI is a supreme performance automatic transmission fluid specially developed for General Motors vehicles. This fluid is formulated with exceptional quality base fluids and advanced additive technology to provide outstanding oxidation resistance, friction durability, wear protection and shear stability. Enhanced foam control maintains responsive shifts and reduces wear on bearings, bushings and gears. Special inhibitors protect crucial parts against rust and corrosion throughout the service life.

Product Characteristics:

Test	Method	Unit	Result
Density at 15°C	D 1298	kg/m³	850
Dynamic Viscosity by Brookfield	D 2983	CP	9960
Viscosity at 40°C	D 445	CSt	25,47
Viscosity at 100°C	D 445	CSt	5,55
Viscosity index	D 2270		164
Flash point COC	D 92	°C	216
Pour point	D 97	°C	-50

Meets the requirements/specifications:

GM DEXRON® VI, FORD MERCON® LV, JASO 1A, MB 236.14, CHRYSLER ATF +4, TOYOTA TYPE WS, HYUNDAI SP-IV, NISSAN MATIC S, ALLISON C4, SHELL M-1375.4.

Volume/weight:/Art.-Nr.:

1L MN8207-1 **10L** MN8207-10 **208L** MN8207-DR
20L MN8207-20 **1000L** MN8207-IBC
60L MN8207-60

8206 DEXRON III AUTOMATIC PLUS

Automatic transmission fluid



Description:

MANNOL Dexron III Automatic Plus is an oil with a high viscosity index for automatic transmissions. It can be used in automatic transmissions, torque convertors, power steering and hydraulic circuits, for which the constructors prescribe a product, which meets the General Motors ATF Type Dexron III or Dexron II-E and Ford Mercon requirements.

Product Characteristics:

Test	Method	Unit	Result
Density at 15°C	D 1298	kg/m³	860
Dynamic Viscosity by Brookfield	D 2983	CP	18000
Viscosity at 40°C	D 445	CSt	34,40
Viscosity at 100°C	D 445	CSt	6,90
Viscosity index	D 2270		180
Flash point COC	D 92	°C	216
Pour point	D 97	°C	-48

Meets the requirements/specifications:

GM DEXRON® III H/G/F, FORD MERCON® V, FORD M2C138-CJ/M2C166-H, MB 236.1, ZF-TE-ML 09/11/14, ALLISON C4/TES 389, VOITH G.607/55.6335.10, Power steering fluid, CATERPILLAR TO-2.

Volume/weight:/Art.-Nr.:

1L MN8206-1 **10L** MN8206-10 **208L** MN8206-DR
4L MN8206-4 **20L** MN8206-20 **1000L** MN8206-IBC
60L MN8206-60

8205 DEXRON II AUTOMATIC

Automatic transmission fluid



Description:

MANNOL Dexron II Automatic is a multipurpose fluid for automatic transmissions, hydraulic steerage systems and hydraulic clutch. Has high performance specifications. Provides long durability of transmission components.

Product Characteristics:

Test	Method	Unit	Result
Density at 15°C	D 1298	kg/m³	850
Dynamic Viscosity by Brookfield	D 2983	CP	45000
Viscosity at 40°C	D 445	CSt	40,07
Viscosity at 100°C	D 445	CSt	7,59
Viscosity index	D 2270		160
Flash point COC	D 92	°C	208
Pour point	D 97	°C	-46

Meets the requirements/specifications:

GM DEXRON® II D, MB 236.5/236.7, MAN 339 V1/Z1, RENK, ALLISON C4, CATERPILLAR TO-2, VOITH G607, ZF TE-ML 03D/04D/11A/14A/17C.

Volume/weight:/Art.-Nr.:

500ml MN8205-05 **10L** MN8205-10 **208L** MN8205-DR
1L MN8205-1 **20L** MN8205-20 **1000L** MN8205-IBC
4L MN8205-4 **60L** MN8205-60

8213 ATF AG60

Automatic transmission fluid



Description:

MANNOL ATF AG60 is a modern synthetic fluid designed for use in most Alpina, Aston Martin, Audi, BMW, Ford, Hyundai, Jaguar, Kia, Land Rover, Maserati, Porsche, Rolls-Royce, VW vehicles that are equipped with 8-, 6-, and 5-speed automatic transmissions by ZF Friedrichshafen AG. Ensures a comfortable gear shift at low temperatures, protects against wear through friction, and prolongs working life of the automatic transmission. The special additive package increases the performance and the reliability of the hydrodynamic coupling, gearwheels, hydraulic servo drive. Increases economy of fuel consumption.

Product Characteristics:

Test	Method	Unit	Result
Density at 15°C	D 1298	kg/m³	850
Dynamic Viscosity by Brookfield	D 2983	CP	10550
Viscosity at 40°C	D 445	CSt	26,80
Viscosity at 100°C	D 445	CSt	5,66
Viscosity index	D 2270		158
Flash point COC	D 92	°C	218
Pour point	D 97	°C	-50

Meets the requirements/specifications:

AUDI/VW G 060162 A1/A2/A6, BMW 832 22 152 426,
LAND ROVER LR023288/LR023289,
ZF S671 090 310/311/312.

Volume/weight:/Art.-Nr.:

1L MN8213-1 **10L** MN8213-10 **208L** MN8213-DR
20L MN8213-20 **1000L** MN8213-IBC
60L MN8213-60

8212 ATF AG55

Automatic transmission fluid



Description:

MANNOL ATF AG55 is a multifunctional ATF for use in modern 6-speed automatic transmission in cars and commercial vehicles. Meets the requirements of the most common specifications of European car manufacturers. Provides an excellent low-temperature switching behaviour, stable high friction level and best wear protective properties for reliable operation and long life.

Product Characteristics:

Test	Method	Unit	Result
Density at 15°C	D 1298	kg/m³	850
Viscosity at 40°C	D 445	CSt	28,60
Viscosity at 100°C	D 445	CSt	6,05
Viscosity index	D 2270		166
Flash point COC	D 92	°C	214
Pour point	D 97	°C	-52

Meets the requirements/specifications:

AUDI/VW G 055005 A1/A2/A6, BMW 83220142516 (1375.4)/
83220144137, FORD MERCON SP, LAND ROVER TYK500050,
JAGUAR C2C 8432, HYUNDAI 040000C90SG,
ZF S671 090 252/253/255.

Volume/weight:/Art.-Nr.:

1L MN8212-1 **10L** MN8212-10 **208L** MN8212-DR
4L MN8212-4 **20L** MN8212-20 **1000L** MN8212-IBC
60L MN8212-60

8211 ATF AG52 AUTOMATIC SPECIAL

Automatic transmission fluid



Description:

MANNOL ATF AG52 Automatic Special is special high quality partially synthetic fluid providing long and accurate functioning of the new automatic transmissions in harsh operating conditions. Its unique performance specifications are granted using highly purified basic oils, synthetic components and new additives technology. It allows to prolong the oil usage preserving its properties. The transmission oil MANNOL ATF AG52 Automatic Special is specially designed for MULTITRONIC, STEPTRONIC, TIPTRONIC transmissions.

Product Characteristics:

Test	Method	Unit	Result
Density at 15°C	D 1298	kg/m³	850
Dynamic Viscosity by Brookfield	D 2983	CP	17800
Viscosity at 40°C	D 445	CSt	36,50
Viscosity at 100°C	D 445	CSt	7,40
Viscosity index	D 2270		174
Flash point COC	D 92	°C	210
Pour point	D 97	°C	-50

Meets the requirements/specifications:

VW TL 52.162, MB 236.11, BMW 832 29 407 807,
JAGUAR JLM 202 38.

Volume/weight:/Art.-Nr.:

1L MN8211-1 **10L** MN8211-10 **208L** MN8211-DR
4L MN8211-4 **20L** MN8211-20 **1000L** MN8211-IBC
60L MN8211-60

8202 DCT FLUID

Dual clutch transmission fluid



Description:

MANNOL DCT Fluid is a synthetic transmission fluid for dual clutch transmission of main manufacturers like VW/Audi, BMW, Ford, Peugeot/Citroen, Volvo, Chrysler, Dodge, Mitsubishi and others. Ensures low wear and long life of the transmission.

Product Characteristics:

Test	Method	Unit	Result
Density at 15°C	D 1298	kg/m³	850
Dynamic Viscosity by Brookfield	D 2983	CP	12400
Viscosity at 40°C	D 445	CSt	31,47
Viscosity at 100°C	D 445	CSt	6,69
Viscosity index	D 2270		177
Flash point COC	D 92	°C	216
Pour point	D 97	°C	-52

Meets the requirements/specifications:

MB 236.21 (001 989 85 03), PORSCHE 999.917.080.00, BMW 83222148578/83222148579/83220440214/83222147477, FORD WSS-M2C936-A, VW/AUDI G 052 182/G 052 529, VOLVO 1161838/1161839, MITSUBISHI Mz320065, PSA 9734.S2.

Volume/weight:/Art.-Nr.:

1L MN8202-1 **10L** MN8202-10 **208L** MN8202-DR
20L MN8202-20 **1000L** MN8202-IBC
60L MN8202-60

8102 MAXPOWER 4x4

Fully synthetic gear oil



Description:

MANNOL Maxpower 4x4 is a fully synthetic high quality transmission oil for lubrication of all the differential gear types including those with higher friction where "Limited Slip Oil API GL5" is used. Provides wear-out protection. Is specially designed for heavily loaded transmissions of sportsters and four-wheel drive vehicles.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			75W-140
Density at 15°C	D 1298	kg/m³	890
Viscosity at 40°C	D 445	CSt	186,20
Viscosity at 100°C	D 445	CSt	24,10
Viscosity index	D 2270		159
Flash point COC	D 92	°C	200
Pour point	D 97	°C	-45

Meets the requirements/specifications:

SAE 75W-140, API GL-5 LS, MIL-L 2105 D; MAN 342, SCANIA STO 1:0.

Volume/weight:/Art.-Nr.:

1L MN8102-1 **10L** MN8102-10 **208L** MN8102-DR
20L MN8102-20 **1000L** MN8102-IBC
60L MN8102-60

8103 EXTRA GETRIEBEOEL

Synthetic gear oil



Description:

MANNOL Extra Getriebeoel is a synthetic high quality transmission oil for lubrication of differential gears, rear axles, steering devices and other transmission control groups. Thanks to special composition is suitable for synchronous transmission gears as well as for high-loaded differential gears.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			75W-90
Density at 15°C	D 1298	kg/m³	890
Dynamic Viscosity by Brookfield	D 2983	CP	135000
Viscosity at 40°C	D 445	CSt	102,85
Viscosity at 100°C	D 445	CSt	16,49
Viscosity index	D 2270		174
Flash point COC	D 92	°C	210
Pour point	D 97	°C	-46

Meets the requirements/specifications:

SAE 75W-90, API GL-4/GL-5 LS; MAN 342 Type M1/M2/M3, MACK GO-J/GO-J Plus, SCANIA STO 1:0.

Volume/weight:/Art.-Nr.:

1L MN8103-1 **10L** MN8103-10 **208L** MN8103-DR
4L MN8103-4 **20L** MN8103-20 **1000L** MN8103-IBC
60L MN8103-60

8109 UNIGEAR

Synthetic gear oil



Description:

MANNOL Unigear is a high quality transmission oil based on synthetic base oils. Enables easy and exact shifting even at low temperatures. Please follow the vehicle or aggregate manufacturer's instructions.

Product Characteristics:

Test	Method	Unit	Result
Density at 15°C	D 1298	kg/m³	857
Dynamic Viscosity by Brookfield	D 2983	CP	130500
Viscosity at 40°C	D 445	CSt	43,78
Viscosity at 100°C	D 445	CSt	8,52
Viscosity index	D 2270		176
Flash point COC	D 92	°C	216
Pour point	D 97	°C	-45

Meets the requirements/specifications:

SAE 75W-80, API GL-4/GL-5;
MACK GO-J Plus, FORD WSD-M2C200-C.

Volume/weight:/Art.-Nr.:

1L MN8109-1 **10L** MN8109-10 **208L** MN8109-DR
20L MN8109-20 **1000L** MN8109-IBC
60L MN8109-60

8106 HYPOID GETRIEBEOEL

Hypoid gear oil



Description:

MANNOL Hypoid Getriebeoel is a multigrade high quality transmission oil with mineral basis for high loaded hypoid gearings. Endures extreme loads. Can be used for the lubrication of cone-, cylinder shaped and screw-gears.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			80W-90
Density at 15°C	D 1298	kg/m³	890
Dynamic Viscosity by Brookfield	D 2983	CP	145000
Viscosity at 40°C	D 445	CSt	175,04
Viscosity at 100°C	D 445	CSt	17,66
Viscosity index	D 2270		110
Flash point COC	D 92	°C	210
Pour point	D 97	°C	-33

Meets the requirements/specifications:

SAE 80W-90, API GL-4/GL-5 LS (Limited Slip);
MIL-L 2105 D, MAN 342, MACK GO-J.

Volume/weight:/Art.-Nr.:

1L MN8106-1 **10L** MN8106-10 **208L** MN8106-DR
4L MN8106-4 **20L** MN8106-20 **1000L** MN8106-IBC
60L MN8106-60

8108 BASIC PLUS

Fully synthetic gear oil



Description:

MANNOL Basic Plus is a fully synthetic high quality transmission oil for lubrication of the transmission gears with integrated differential gears. Provides high differential gears protection and increases their life circles. Prolongs periods between oil change. Meets the requirements of most of the auto producers.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			75W-90
Density at 15°C	D 1298	kg/m³	890
Viscosity at 40°C	D 445	CSt	87,30
Viscosity at 100°C	D 445	CSt	15,30
Viscosity index	D 2270		186
Pour point	D 97	°C	-45

Meets the requirements/specifications:

SAE 75W-90, API GL-4+;
MIL-L 2105 D, VW 501.50.

Volume/weight:/Art.-Nr.:

1L MN8108-1 **10L** MN8108-10 **208L** MN8108-DR
4L MN8108-4 **20L** MN8108-20 **1000L** MN8108-IBC
60L MN8108-60

8104 MTF-4 GETRIEBEOEL

Synthetic gear oil



Description:

MANNOL MTF-4 Getriebeoel is a new generation synthetic transmission oil for mechanic 5- and 6-speed transmissions from Volvo, Toyota, Nissan, BMW, Mitsubishi, Peugeot, Honda, ZF etc. Modern additive package provides easy start, smooth operation of manual transmissions at low temperatures and under high loads hold excellent anti-foaming properties and high thermal stability compatible with all types of construction materials. Extended oil change periods. Exceed most requirements of automotive manufacturers.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			75W-80
Density at 15°C	D 1298	kg/m³	850
Dynamic Viscosity by Brookfield	D 2983	CP	120500
Viscosity at 40°C	D 445	CSt	57,98
Viscosity at 100°C	D 445	CSt	9,47
Viscosity index	D 2270		146
Flash point COC	D 92	°C	216
Pour point	D 97	°C	-45

Meets the requirements/specifications:

SAE 75W-80, API GL-4/GL-5;
BMW MTF LT-1/-2/-3/-4, MB 235.10, FORD WSS-M2C200-D2,
VW G009 317/G052 171/G52 178/G052 512/G052 532/G052 527/
G052 726/G052 798/G055 726, PEUGEOT 9730A2/A8,
PSA B 71 2330, MITSUBISHI MZ312644 3005401,
NISSAN 999MP-MTF20P KE91699932R, TOYOTA JWS 227.

Volume/weight:/Art.-Nr.:

1L MN8104-1 **10L** MN8104-10 **208L** MN8104-DR
4L MN8104-4 **20L** MN8104-20 **1000L** MN8104-IBC
60L MN8104-60

8101 FWD GETRIEBEOEL

Semi-synthetic gear oil



Description:

MANNOL FWD Getriebeoel is a unique semi synthetic multigrade transmission oil (Front Wheel Drive) providing safe and accurate functioning of manual gearboxes and gear differentials with front-end, drives at wide-ranging temperatures: from -45°C to +45 °C. Has perfect low-temperature properties and high thermal stability.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			75W-85
Density at 15°C	D 1298	kg/m³	890
Dynamic Viscosity by Brookfield	D 2983	CP	137000
Viscosity at 40°C	D 445	CSt	72,40
Viscosity at 100°C	D 445	CSt	11,76
Viscosity index	D 2270		157
Flash point COC	D 92	°C	210
Pour point	D 97	°C	-46

Meets the requirements/specifications:

SAE 75W-85, API GL-4, API MT-1;
AGMA 252.04, ISO 12925-1 CKC, ISO 6743-6 CKC,
US STEEL 224, DIN 51517 Part III.

Volume/weight:/Art.-Nr.:

1L MN8101-1 **10L** MN8101-10 **208L** MN8101-DR
4L MN8101-4 **20L** MN8101-20 **1000L** MN8101-IBC
60L MN8101-60

8107 UNIVERSAL GETRIEBEOEL

Universal gear oil



Description:

MANNOL FWD Getriebeoel is a unique semi-synthetic multigrade transmission oil (Front Wheel Drive) providing safe and accurate functioning of manual gearboxes and gear differentials with front-end, drives at wide-ranging temperatures: from -45°C to +45 °C. Has perfect low temperature properties and high thermal stability.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			80W-90
Density at 15°C	D 1298	kg/m³	890
Dynamic Viscosity by Brookfield	D 2983	CP	146000
Viscosity at 40°C	D 445	CSt	165,23
Viscosity at 100°C	D 445	CSt	16,45
Viscosity index	D 2270		105
Flash point COC	D 92	°C	214
Pour point	D 97	°C	-32

Meets the requirements/specifications:

SAE 80W-90, API GL-4;
AGMA 252.04, ISO 12925-1 CKC, ISO 6743-6 CKC,
US STEEL 224, DIN 51517 Part III.

Volume/weight:/Art.-Nr.:

1L MN8107-1 **10L** MN8107-10 **208L** MN8107-DR
4L MN8107-4 **20L** MN8107-20 **1000L** MN8107-IBC
60L MN8107-60

8105 HYPOID LSD

Truck gear oil



Description:

MANNOL Hypoid LSD is a high quality transmission oil with mineral basis for mechanical transmission aggregates of trucks and passenger vehicles that provides safe functioning of self-locking gears with limited slip, main gears, reducing gears, driving axles and other loaded transmission control groups. Has perfect anti-tearing and anti-wear properties. Improved thermal and oxidation stability provides perfect cleanness of the mechanisms and prolonged oil cycle life before change.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			85W-140
Density at 15°C	D 1298	kg/m³	890
Viscosity at 40°C	D 445	CSt	328,0
Viscosity at 100°C	D 445	CSt	25,40
Viscosity index	D 2270		100
Flash point COC	D 92	°C	228
Pour point	D 97	°C	-25

Meets the requirements/specifications:

SAE 85W-140, API GL-5 LS, API MT-1;
AGMA 252.04, ISO 12925-1 CKC, ISO 6743-6 CKC,
US STEEL 224, DIN 51517 Part III.

Volume/weight:/Art.-Nr.:

1L MN8105-1
4L MN8105-4
10L MN8105-10
20L MN8105-20
60L MN8105-60
208L MN8105-DR
1000L MN8105-IBC



8302 LDS FLUID

Hydraulic fluid



Description:

MANNOL LDS Fluid - synthetic lubricant based on carefully selected very high quality base oils. High performance hydraulic fluid for application in modern vehicle aggregates, among others, Citroën. Not compatible with mineral green coloured LHM+ fluids.

Product Characteristics:

Test	Method	Unit	Result
Density at 15°C	D 1298	kg/m³	835
Viscosity at 40°C	D 445	CSt	30,90
Viscosity at 100°C	D 445	CSt	7,10
Viscosity index	D 2270		204
Pour point	D 97	°C	-55

Meets the requirements/specifications:

PSA S71 2710.

Volume/weight:/Art.-Nr.:

1L MN8302-1 **10L** MN8302-10 **208L** MN8302-DR
20L MN8302-20 **1000L** MN8302-IBC
60L MN8302-60

8301 LHM+ FLUID

Hydraulic fluid



Description:

MANNOL LHM+ Fluid is a hydraulic thin fluid for hydropneumatics suspensions systems, brakes, and steering boosters in Citroën, Peugeot, Mercedes Benz and Volkswagen cars. Provide safe and smooth fluid power system functioning at low temperatures (-50 °C). Has high anti-wear, antioxygenic and anticorrosion properties. Is neutral to rubber sleeves and seals. Has perfect demulsifying properties.

Product Characteristics:

Test	Method	Unit	Result
Density at 15°C	D 1298	kg/m³	870
Viscosity at 40°C	D 445	CSt	19,70
Viscosity at 100°C	D 445	CSt	6,08
Viscosity index	D 2270		294

Meets the requirements/specifications:

ISO 7308, DIN 51524.3, PSA B 71 2710, SDFG OF1611S, FIAT 9.55597, IVECO 18-1823, NH 610 A.

Volume/weight:/Art.-Nr.:

1L MN8301-1 **10L** MN8301-10 **208L** MN8301-DR
20L MN8301-20 **1000L** MN8301-IBC
60L MN8301-60

8204 ATF-A PSF

Hydraulic and power transmission fluid



Description:

MANNOL ATF-A PSF is suitable as hydraulic and power transmission fluid in hydraulics and power steering of cars, trucks, busses and special vehicles in accordance to specification GM ATF-A Suffix A. Also usable for hydrodynamic converters and automatic transmissions.

Product Characteristics:

Test	Method	Unit	Result
Density at 15°C	D 1298	kg/m³	850
Viscosity at 40°C	D 445	CSt	36,91
Viscosity at 100°C	D 445	CSt	6,91
Viscosity index	D 2270		149
Flash point COC	D 92	°C	200
Pour point	D 97	°C	-46

Meets the requirements/specifications:

GM ATF-A Suffix A, ALLISON C3, CATERPILLAR TO-2.

Volume/weight:/Art.-Nr.:

500ml MN8204-05 **10L** MN8204-10 **208L** MN8204-DR
1L MN8204-1 **20L** MN8204-20 **1000L** MN8204-IBC
4L MN8204-4 **60L** MN8204-60

8970 POWER STEERING FLUID

Power Steering Fluid for Honda



Description:

MANNOL Power Steering Fluid is a high quality fluid for hydraulic systems used in cars Honda and Acura. Thoroughly selected additives and synthetic components provide best properties at temperatures ranging from -40 °C to +100 °C, high antioxygenic and chemical stability during the whole operation life.

Product Characteristics:

Test	Method	Unit	Result
Density at 15°C	D 1298	kg/m³	850
Viscosity at 40°C	D 445	CSt	56,00
Viscosity at 100°C	D 445	CSt	12,04
Viscosity index	D 2270		218
Flash point COC	D 92	°C	216
Pour point	D 97	°C	-51

Meets the requirements/specifications:

HONDA ULTRA PSF-II, HONDA PSF Type S, HONDA PSF Type V, HONDA 08206-9002, ACURA 08206-9002A.

Volume/weight:/Art.-Nr.:

500ml 8970 **1L** 8970

8980 POWER STEERING FLUID

Power Steering Fluid for Mercedes



Description:

MANNOL Power Steering Fluid is a high quality fluid for hydraulic systems where the use of MB 236.3 fluids is prescribed. Thoroughly selected additives and synthetic components provide best properties at temperatures ranging from -40 °C to +100 °C, high antioxygenic and chemical stability during the whole operation life.

Product Characteristics:

Test	Method	Unit	Result
Density at 15°C	D 1298	kg/m³	850
Viscosity at 40°C	D 445	CSt	37,51
Viscosity at 100°C	D 445	CSt	7,20
Viscosity index	D 2270		158
Flash point COC	D 92	°C	220
Pour point	D 97	°C	-46

Meets the requirements/specifications:

MB 236.3, ZF TE-ML 03D/04D/09/11/14A/17C.

Volume/weight:/Art.-Nr.:

500ml 8980 **1L** 8980

8990 CENTRAL HYDRAULIC FLUID

Hydraulic fluid



Description:

MANNOL Central Hydraulic Fluid is high performance hydraulic fluid for life-time application in modern vehicle aggregates like power steering, level control, shock absorber, hydro-pneumatic suspension, stability- and traction control, hydraulics for convertible tops, central lock systems. It is suitable for all extreme conditions and guarantees full performance from -40 °C to over +130 °C system temperature. Especially designed for hydraulics in the automotive industry with highest technical requirements. To mix only with original central hydraulic fluids.

Product Characteristics:

Test	Method	Unit	Result
Density at 15°C	D 1298	kg/m³	830
Viscosity at 40°C	D 445	CSt	22,38
Viscosity at 100°C	D 445	CSt	6,50
Viscosity index	D 2270		275
Pour point	D 97	°C	-51

Meets the requirements/specifications:

VW TL 52146 (G 002 000/G 004 000),
FORD WSS-M2C204-A, FENDT X 902.011.622,
BMW 81 22 9 407 758, GM/OPEL B 0400070,
MAN TUC 3623/93, MB 345.0, CHF 11 S, VOLVO 8713089.

Volume/weight:/Art.-Nr.:

500ml 8990 **1L** 8990

9891 PAG 46 REFRIGERANT R134 A/C OIL

Synthetic refrigerant oil



Description:

MANNOL PAG 46 REFRIGERANT R134A A/C OIL is fully synthetic oil which is used for lubrication, sealing and cooling of refrigerant compressors or refrigerant circuits in passenger or commercial vehicles' air conditioning systems. Miscible with type R134a fluids. Complies with the requirements of standard refrigerant compressors and refrigeration system manufacturers. Wet the seals with a brush during assembly. To top up or replace the refrigerant oil use a special filling cylinder and an air conditioning system filling device. Always reseal the package after use to prevent the oil from absorbing moisture from the air.
Automotive air conditioning compressors require specific types of lubricants. Most 1996 and newer A/C systems use the R134a refrigerant and require some type of PAG (polyalkylene glycol) oil for the compressor. If the wrong type of compressor oil or the wrong viscosity compressor oil is used, it may damage the compressor. In fact, the main reason for a newly installed A/C compressor to fail is using the wrong type of compressor oil.

Volume/weight:/Art.-Nr.:

250ml 9891

3002 DOT-4 BRAKE FLUID

Brake fluid



Description:

MANNOL DOT-4 Brake Fluid is recommended for hydraulic brake systems and clutches using the synthetic fluid of the mentioned specifications. Provides smooth brake system functionality thanks to a higher boiling point (>260 °C) and perfect low temperature properties (down to -40 °C). Neutral to brake system components. Can be mixed with any fully synthetic brake fluid of similar specifications. Observe the car manufacturer's recommendations.

Meets the requirements/specifications:

SAE J 1703, FMVSS 116 DOT 4, ISO 4925.

Volume/weight:/Art.-Nr.:

500ml 3002 **1L** 3002

9894 AIR BRAKE ANTIFREEZE

Air brake coolant fluid



Description:

MANNOL Air Brake Antifreeze is an antifreeze substance for air brake systems preventing ice formation in brake hoses and air brake systems receivers of trucks, buses, construction, agricultural and other vehicles. Mannol Air Brake Antifreeze contains special components effectively preventing from rust and corrosion. Guarantees brake valves cleanness. Effectively binds condensate and damp for secure driving.

Volume/weight:/Art.-Nr.:

500ml 9894

4111 AG11 ANTIFREEZE

Concentrated longterm coolant fluid



Description:

MANNOL AG11 Antifreeze Concentrate is a concentrate, intended for year-round use in any modern aluminium and copper cooling systems, which are using antifreeze on ethylene-glycol-basis. Protects against corrosion and scaling. No foam, neutral to gaskets and sleeves. Gives sufficient anti corrosive properties already at concentration of 20%. It's a low silicate liquid. Does not contain nitrates and phosphates. Lifespan: 3 years.

Meets the requirements/specifications:

ASTM D3306, ASTM D4340, ASTM D4985, SAE J1034, NATO S759, VAG TL 774C.

Volume/weight:/Art.-Nr.:

1L MN4111-1
5L MN4111-5
10L MN4111-10
20L MN4111-20
60L MN4111-60
208L MN4111-DR
1000L MN4111-IBC

4112 AF12+ ANTIFREEZE

Concentrated longlife coolant fluid



Description:

MANNOL AF12+ Antifreeze Concentrate - contains an ingenious inhibitor formulation that efficiently prevents corrosion, depositions and foam formation to guarantee increased service intervals, optimal heat dissipation and overheat protection of your radiator. It is an ethylene glycol based silicate-free, amine-free, nitrite-free, phosphate-free radiator antifreeze with outstanding properties and is therefore suitable for all aluminium, copper and cast iron radiators. Concentrate must be mixed according to the below table and only with water. It is not recommended to mix this product with other antifreeze products.

Meets the requirements/specifications:

ASTM D3306/D4985, SAE J1034, NATO S759 BS 6580 (1992), AFNOR NF R15-601, JIS K 2234, FFV Heft R443, UNE 26361-88, VAG TL 774 J, MB 325.3, RENAULT 41-01-001, VOLVO, MAN 24/324 (SNF)&B&W D 36 5600, FORD ESE M97B49-A, WSS-M97B44-D&ESD M97 B49-A, CHRYSLER MS 9176, GM 1899 M, US 6277 M&OPEL GM QL130100, CUMMINS 85T8-2&90T8-4, LEYLAND TRUCKS LTS 22 AF 10, MACK 014GS 17004, JOHN DEERE H 24 B1&C1.

Volume/weight:/Art.-Nr.:

1L MN4112-1
5L MN4112-5
10L MN4112-10
20L MN4112-20
60L MN4112-60
208L MN4112-DR
1000L MN4112-IBC

4113 AG13 ANTIFREEZE

Concentrated hightec coolant fluid



Description:

MANNOL AG13 Antifreeze - contains an ingenious inhibitor formulation that efficiently prevents corrosion, depositions and foam formation to guarantee increased service intervals, optimal heat dissipation and overheat protection of your radiator. It is an ethylene glycol based amine-free, nitrite-free, phosphate-free radiator antifreeze with outstanding properties and is therefore suitable for all aluminium, copper and cast iron radiators. Concentrate must be mixed according to the below table and only with water. It is not recommended to mix this product with other antifreeze products.

Meets the requirements/specifications:

ASTM D3306/D4340/D4985, SAE J034, NATO S759,
MB 325.3, GM 1825M/1899M, GM SATURN,
OPEL-GM QI130100, MAN M 324, BMW, JAGUAR, SAAB,
ROVER, RENAULT Type D, Ford ESE M978B4H-A,
FORD AF Plus, JOHN DEERE, DAF.

Volume/weight:/Art.-Nr.:

1L MN4113-1 **10L** MN4113-10 **208L** MN4113-DR
5L MN4113-5 **20L** MN4113-20 **1000L** MN4113-IBC
60L MN4113-60

4114 AG13+ ANTIFREEZE

Concentrated advanced coolant fluid



Description:

MANNOL AG13+ Antifreeze - contains an ingenious inhibitor formulation that efficiently prevents corrosion, depositions and foam formation to guarantee increased service intervals, optimal heat dissipation and overheat protection of your radiator. It is an ethylene glycol based amine-free, nitrite-free, phosphate-free radiator antifreeze with outstanding properties and is therefore suitable for all aluminium, copper and cast iron radiators. Concentrate must be mixed according to the below table and only with water. It is not recommended to mix this product with other antifreeze products.

Meets the requirements/specifications:

ASTM D3306/D4340/D4985, SAE J1034, NATO S759,
MB 325.3, GM 1825M/1899M, GM SATURN,
OPEL-GM QL130100, MAN M 324, BMW, JAGUAR, SAAB,
ROVER, RENAULT Type D, FORD ESE M978B4H-A,
FORD AF Plus, JOHN DEERE DAF.

Volume/weight:/Art.-Nr.:

1L MN4114-1 **10L** MN4114-10 **208L** MN4114-DR
5L MN4114-5 **20L** MN4114-20 **1000L** MN4114-IBC
60L MN4114-60

4115 AF13++ ANTIFREEZE

Concentrated high-performance coolant fluid



Description:

MANNOL AF13++ Antifreeze is Eco-friendly coolant concentrate of the latest generation, protects the engine against corrosion, overheating and frost. This coolant uses the lobrid technology OAT. Can be applied in all modern cooling systems.

Meets the requirements/specifications:

ASTM D3306 (USA), ASTM D4656 (USA),
ASTM D4985 (USA), AS 2108 (Australia),
SAE J 1034, BS 6580: 1992, AFNOR NF R15-601 (France)*,
FFV Heft R443, CUNA NC 956-16, UNE 26361-88,
NATO S 759.
Suitable for adding to or replacing VOLKSWAGEN VAG TL 774 F/G
* - except for reserve alkalinity

Volume/weight:/Art.-Nr.:

1L MN4115-1 **10L** MN4115-10 **208L** MN4115-DR
5L MN4115-5 **20L** MN4115-20 **1000L** MN4115-IBC
60L MN4115-60



M.O. SERIES

Industrial engine oil

Description:

MANNOL M.O. series are premium quality single-graded motor oils for use in engine crankcases of passenger cars, trucks, tractors, buses, inboard marine and other equipment according to engine manufacturers recommendations.

Range: SAE 10W, SAE 20W, SAE 30, SAE 40, SAE 50.

Meets the requirements/specifications:

API CD/SD;
CATERPILLAR SERIES 3, MACK EO-J, DAVID BROWN DB OM 616, MIL-L 2104 C, VOLVO B20.

Product Characteristics:

SAE 10W	**10L** MN3101-10	**208L** MN3101-DR
	20L MN3101-20	**1000L** MN3101-IBC
	60L MN3101-60	
SAE 20W	**10L** MN3102-10	**208L** MN3102-DR
	20L MN3102-20	**1000L** MN3102-IBC
	60L MN3102-60	
SAE 30	**10L** MN3103-10	**208L** MN3103-DR
	20L MN3103-20	**1000L** MN3103-IBC
	60L MN3103-60	
SAE 40	**10L** MN3104-10	**208L** MN3104-DR
	20L MN3104-20	**1000L** MN3104-IBC
	60L MN3104-60	
SAE 50	**10L** MN3105-10	**208L** MN3105-DR
	20L MN3105-20	**1000L** MN3105-IBC
	60L MN3105-60	

2801 GEAR OIL ISO 220

Industrial gear oil

Description:

MANNOL Gear Oil ISO 220 is an industrial gear oil that provides excellent protection and oil life in extreme conditions. It offers exceptional oxidation resistance and thermal properties, a high viscosity index (VI) and low-temperature fluidity.

Product Characteristics:

Test	Method	Unit	Result
ISO-class			220
Density at 15°C	D 1298	kg/m³	890
Viscosity at 40°C	D 445	CSt	208,0
Viscosity at 100°C	D 445	CSt	18,10
Viscosity index	D 2270		95
Flash point COC	D 92	°C	215
Pour point	D 97	°C	-32

Meets the requirements/specifications:

ISO 220;
AGMA 252.04, ISO 12925-1 CKC/CKD, ISO 6743-6 CKC/CKD, US STEEL 224, DIN 51 517 p. 3 CLP.

Volume/weight:/Art.-Nr.:

10L MN2801-10 **208L** MN2801-DR
20L MN2801-20 **1000L** MN2801-IBC
60L MN2801-60

HYDRO SERIES

Industrial hydraulic oil

Description:

MANNOL Hydro series are available in five ISO viscosity grades for use in virtually all machine lubrication and hydraulic fluid applications. MANNOL Hydro are premium products formulated with an effective anti-wear compound for hydraulic or circulating systems requiring high quality anti-wear oils, such as those recommended by hydraulic pump and machine tool manufacturers. They are formulated with high quality base oils with superior thermal and oxidative stability.

Range: ISO 32, ISO 46, ISO 68, ISO 100, ISO 150.

Meets the requirements/specifications:

ISO HLP, ISO 11158,
DIN EN ISO 6743/4:HM, DIN 51524 Part 2.1, AFNOR NF E 48-603, DENISSON HF-2/HF-0, DENISON FILTERABILITY TP 02100, ASLE 70-1/70-2/70-3, DAVID BROWN ET19/ET33, SPERRY VICKERS M2950-SD/I-286-S, VDMA24318, US STEEL 126/127.

Volume/weight:/Art.-Nr.:

ISO 32	**10L** MN2101-10	**208L** MN2101-DR
	20L MN2101-20	**1000L** MN2101-IBC
	60L MN2101-60	
ISO 46	**10L** MN2102-10	**208L** MN2102-DR
	20L MN2102-20	**1000L** MN2102-IBC
	60L MN2102-60	
ISO 68	**10L** MN2103-10	**208L** MN2103-DR
	20L MN2103-20	**1000L** MN2103-IBC
	60L MN2103-60	
ISO 100	**10L** MN2104-10	**208L** MN2104-DR
	20L MN2104-20	**1000L** MN2104-IBC
	60L MN2104-60	
ISO 150	**10L** MN2105-10	**208L** MN2105-DR
	20L MN2105-20	**1000L** MN2105-IBC
	60L MN2105-60	

HYDRO HV SERIES

Industrial hydraulic oil

Description:

MANNOL Hydro HV series are high performance hydraulic oils blended in combination with hydrotreated base oils to meet the requirements of the most demanding hydraulic systems. MANNOL Hydro HV have been specifically developed to reduce maintenance costs to a minimum and increase productivity by keeping hydraulic systems running efficiently.

Range: HV ISO 32, HV ISO 46, HN ISO 68.

Meets the requirements/specifications:

DIN 51 524 p. 2 (HM), DIN 51 524 p. 3 (HV), PARKER (formerly DENISON) HF-0/HF-1/HF-2, EATON M-2950-S and I-286-S3, MAG P68/P69/P70, ISO 11158, ASTM D6158, SAE MS 1004, BOSCH REXROTH RE 90220, JCMAS P041 HK Hydraulic Specification, ANSI/AGMA 9005-E02-RO, GM LS-2, AIST 126/127, SEB 181222.

Volume/weight:/Art.-Nr.:

HV ISO 32	**10L** MN2201-10	**208L** MN2201-DR
	20L MN2201-20	**1000L** MN2201-IBC
	60L MN2201-60	
HV ISO 46	**10L** MN2202-10	**208L** MN2202-DR
	20L MN2202-20	**1000L** MN2202-IBC
	60L MN2202-60	
HV ISO 68	**10L** MN2203-10	**208L** MN2203-DR
	20L MN2203-20	**1000L** MN2203-IBC
	60L MN2203-60	

COMPRESSOR OIL SERIES

Compressor oil

Description:

MANNOL Compressor Oil is a special mineral oil on the highly purified basic, designed for lubrication of pneumatic tools, reciprocating and rotary compressors. Ashless additive package prevents the formation of high-temperature deposits. Has excellent anti-corrosion, anti-wear and extreme pressure characteristics. Provides a stable and uninterrupted operation of equipment during the entire lifespan.

Range: ISO 46, ISO 100, ISO 150.

Meets the requirements/specifications:

ISO-L DAA/ DAB/ DAG/ DAH, DIN 51506, VBL, VCL&VDL, ISO 6743/11 Class P, Denison T-6H20C Hybrid Pump (A-TP-30533) pass for Denison HF-0.

Volume/weight:/Art.-Nr.:

ISO 46	**1L** MN2901-1	**208L** MN2901-DR
	10L MN2901-10	**1000L** MN2901-IBC
	20L MN2901-20	
	60L MN2901-60	
ISO 100	**1L** MN2902-1	**208L** MN2902-DR
	10L MN2902-10	**1000L** MN2902-IBC
	20L MN2902-20	
	60L MN2902-60	
ISO 150	**10L** MN2903-10	**208L** MN2903-DR
	20L MN2903-20	**1000L** MN2903-IBC
	60L MN2903-60	

TURBINE SERIES

Turbine oil

Description:

MANNOL Turbine series are premium quality lubricating oils designed to provide excellent lubrication of precision turbines and many other industrial applications. These oils are made from base oils, which have been carefully selected to provide satisfactory viscosity/temperature characteristics, low foaming tendencies and good water separation properties. In addition, they contain proven additives to protect equipment against rusting and to resist oxidation for long service life.

Volume/weight:/Art.-Nr.:

ISO 32	**10L** MN2301-10	**208L** MN2301-DR
	20L MN2301-20	**1000L** MN2301-IBC
	60L MN2301-60	
ISO 46	**10L** MN2302-10	**208L** MN2302-DR
	20L MN2302-20	**1000L** MN2302-IBC
	60L MN2302-60	
ISO 68	**10L** MN2303-10	**208L** MN2303-DR
	20L MN2303-20	**1000L** MN2303-IBC
	60L MN2303-60	

Range: ISO 32, ISO 46, ISO 68.

Meets the requirements/specifications:

DIN 51515 Part 1, DIN 51517 Part 2, DIN 51524 Part 1, DIN 51506 (VBL, VCL, VDL), TLV 9013, BS 489, GE GEK 32568 A/C, CEGB 207001, CINCINNATI P38/P55/P54/P57/P62, AFNOR NF E 48-603, VDMA 24568 US STEEL 120; MIL-L-17672 D, BB HTGD 90117, DP 6521 (DAA, DAB, DAH, DAG), MITSUBISHI HEAVY INDUSTRIES E00-87182.

1102 FLUSHING OIL

Low viscosity mineral oil

Description:

MANNOL Flushing oil is low viscosity mineral oil with good flushing and cleaning properties. It is used for flushing the oil sump and lubrication systems of internal combustion engines. It can also be used for flushing transmissions and gear boxes, to remove dirt, deposits and wear particles.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			10
Density at 15°C	D 1298	kg/m³	880
Viscosity at 40°C	D 445	CSt	34,80
Viscosity at 100°C	D 445	CSt	5,32
Viscosity index	D 2270		91
Flash point COC	D 92	°C	206
Pour point	D 97	°C	-15
TBN	D 2896	gKOH/kg	0,72

Meets the requirements/specifications:

SAE 10.

Volume/weight:/Art.-Nr.:

10L MN1102-10	**208L** MN1102-DR
20L MN1102-20	**1000L** MN1102-IBC
60L MN1102-60	

1103 EMULSION

Mineral oil

Description:

MANNOL Emulsion is a mineral oil with anti-corrosion inhibitors. The oil is mixed with water and forms a stable emulsion, the preservatives ensure a long-term operation. The mixing ratio is 1:20. The emulsion cools, lubricates and protects the metal to be treated from corrosion. The emulsion is used for cutting, drawing, broaching, thread-cutting, drilling, bending, pressing and grinding of metal at very high loads and temperatures (of the metal to be treated).

Product Characteristics:

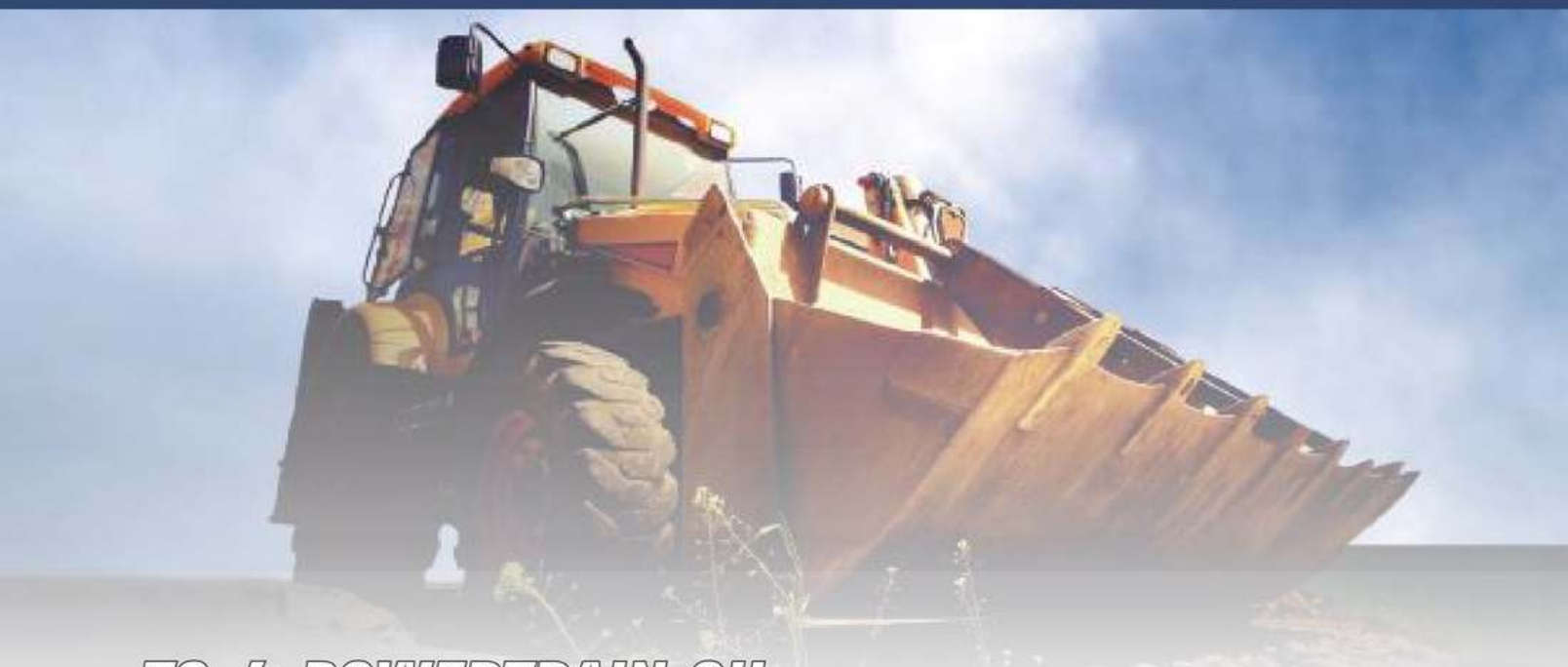
Test	Method	Unit	Result
ISO-class			32
Density at 15°C	D 1298	kg/m³	878
Viscosity at 40°C	D 445	CSt	30,30
Viscosity at 100°C	D 445	CSt	5,10
Viscosity index	D 2270		94
Flash point COC	D 92	°C	200
Pour point	D 97	°C	-10

Meets the requirements/specifications:

ISO 32.

Volume/weight:/Art.-Nr.:

20L MN1103-20	**208L** MN1103-DR
	1000L MN1103-IBC



TO-4 POWERTRAIN OIL

Industrial machinery oil

Description:

MANNOL TO-4 Powertrain Oil is a special gear oil for use in transmission, final drives, hydraulic, brake and other oil-cooled systems in construction, mining and off-road vehicles (tractors, loaders, bulldozers, excavators). Provides a longer life of the clutch discs. Meets the Cat TO-4 requirements for lubricants TDTO (Transmission/Drive Train Oil) from Caterpillar. It is not recommended to mix the oil with other hydraulic and/or engine oils.

Volume/weight:/Art.-Nr.:

SAE 10W	**10L** MN2601-10	**208L** MN2601-DR
	20L MN2601-20	**1000L** MN2601-IBC
	60L MN2601-60	
SAE 30	**10L** MN2602-10	**208L** MN2602-DR
	20L MN2602-20	**1000L** MN2602-IBC
	60L MN2602-60	
SAE 50	**10L** MN2603-10	**208L** MN2603-DR
	20L MN2603-20	**1000L** MN2603-IBC
	60L MN2603-60	

Range: SAE 10W, SAE 30, SAE 50.

Meets the requirements/specifications:

CATERPILLAR TO-4, KOMATSU KES 07.868.1, ALLISON C4 (off-road).

MULTIFARM STOU

Agricultural machinery oil

Description:

MANNOL Multifarm STOU is a multi-purpose oil for agricultural and construction machinery, turbo-charged and uncharged. Oil can be used all year round for engines, transmissions with wet brakes and hydraulic systems.

Range: SAE 10W-30, SAE 10W-40.

Meets the requirements/specifications:

API CG-4/CF-4/CF/CE/CD/SF, ACEA E3, MB 227.1/228.1.
UTTO Specs.: API GL-4 FORD M2C86B/C/M2C134D, JOHN DEERE J20C/J20D, J.I CASE/CASE INT MS-1204/6/7/9, CNH MAT 3525/3526, CATERPILLAR TO-2, ALLISON C-4, MASSEY FERGUSON M1135/1143/1145.
STOU Specs.: ZF TE-ML 06A/06B(inc.06R)/06C/07B, FORD M2C159B/C, JOHN DEERE J27, FORD NEW HOLLAND 82009201/2/3, MASSEY FERGUSON M1145/1139/1144, Hydraulic Specs.: SPERRY VISKERS/EATON M2950S/I-280-S, SAUER SUNSDTRAND/DANFOSS, HYDROSTATIC TRANS FLUID, Suitable for Wet Brakes.

Product Characteristics:

Test	Method	Unit	Result	
SAE-class			10W-30	10W-40
Density at 15°C	D 1298	kg/m³	870	870
Viscosity at 40°C	D 445	CSt	68,80	96,17
Viscosity at 100°C	D 445	CSt	10,48	13,99
Viscosity at -25°C	D 5293	CP	5650	6820
Viscosity index	D 2270		140	148
Flash point COC	D 92	°C	226	226
Pour point	D 97	°C	-35	-35
TBN	D 2896	gKOH/kg	10,86	10,86

Volume/weight:/Art.-Nr.:

SAE 10W-30	**10L** MN2501-10	**208L** MN2501-DR
	20L MN2501-20	**1000L** MN2501-IBC
	60L MN2501-60	
SAE 10W-40	**10L** MN2502-10	**208L** MN2502-DR
	20L MN2502-20	**1000L** MN2502-IBC
	60L MN2502-60	

2701 MULTI UTTO WB 101

Agricultural machinery oil

Description:

MANNOL Multi UTTO WB 101 is an extra high performance multipurpose tractor lubricant engineered to meet transmission and hydraulic fluid requirements. Optimises performance of agricultural and commercial tractors operating in a wide range of environments and conditions. Combines select base oils and advanced additive package to deliver the varied lubricant performance properties required in severe duty applications of agricultural and construction equipment drive trains. It is particularly well suited for reducing wet brake and Power Take-Off chatter. Delivers exceptional performance in today's power train transmissions, drive axles, clutches, PTOs and hydraulic systems.

Meets the requirements/specifications:

API GL-4;
VOLVO VCE WB 101, FORD M2C134-A/B/C/D/M2C86-B/C,
MASSEY-FERGUSON M1135/M1141/M1143/M1145, CNH MAT 3525/3526,
JOHN DEERE J20C, J.I. CASE MAT 3505 (MS-1209)/MS-1206/MS-1207/MS-1210,
CATERPILLAR TO-2, NEW HOLLAND FNHA-2-C-200/FNHA-2-C-201,
ZF TE-ML 03E/03F/05F/06K, ALLISON C-4.

Product Characteristics:

Test	Method	Unit	Result
Density at 15°C	D 1298	kg/m³	883
Viscosity at 40°C	D 445	CSt	66,07
Viscosity at 100°C	D 445	CSt	10,77
Viscosity index	D 2270		153
Flash point COC	D 92	°C	220
Pour point	D 97	°C	-45
TBN	D 2896	gKOH/kg	5,73

Volume/weight:/Art.-Nr.:

10L MN2701-10 **208L** MN2701-DR
20L MN2701-20 **1000L** MN2701-IBC
60L MN2701-60

7406 TRAKTOR SUPEROIL

Tractor engine oil



Description:

MANNOL Traktor Superoil is an all year round engine oil that ensures good lubrication of Result four-stroke diesel engines. It is used in engines of machinery, vehicles and other equipment that requires use of oil according to the indicated parameters. The oil is recommended for engines with and without turbocharger.

Meets the requirements/specifications:

SAE 15W-40, API SG/CD.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			15W-40
Density at 15°C	D 1298	kg/m³	890
Viscosity at 40°C	D 445	CSt	105,20
Viscosity at 100°C	D 445	CSt	13,54
Viscosity at -20°C	D 5293	CP	6980
Viscosity index	D 2270		127
Flash point COC	D 92	°C	226
Pour point	D 97	°C	-25
TBN	D 2896	gKOH/kg	4,80

Volume/weight:/Art.-Nr.:

5L MN7406-5 **10L** MN7406-10 **208L** MN7406-DR
20L MN7406-20 **1000L** MN7406-IBC
60L MN7406-60



MARINE 9-SERIES

Marine oil

Description:

MANNOL Marine 09-series are high performance diesel engine oils developed for use on low sulphur distillate fuels in marine and industrial applications. They are formulated to have excellent resistance to oxidation and viscosity increase over a long period of service. Product has superior water separating properties and provide excellent corrosion protection. MANNOL Marine 0930/0940/0950 are formulated with base oils having proven successful performance in diesel engines. The additive system is balanced to provide excellent resistance to thermal degradation under moderately severe operating conditions, provide good engine cleanliness and superior wear protection.

Range: 0930 - SAE 30, 0940 - SAE 40, 0950 - SAE 50.

Meets the requirements/specifications:

API CF, TBN 9.

Product Characteristics:

Test	Method	Unit	Result		
SAE-class			30	40	50
Density at 15°C	D 1298	kg/m³	900	900	900
Viscosity at 100°C	D 445	CSt	10,5	14,2	19,1
Viscosity index	D 2270		92	92	92
Flash point COC	D 92	°C	210	220	225
Pour point	D 97	°C	-10	-10	-10
TBN	D 2896	gKOH/kg	9,0	9,0	9,0

Volume/weight:/Art.-Nr.:

0930 **208L** MN2401-DR **1000L** MN2401-IBC
0940 **208L** MN2402-DR **1000L** MN2402-IBC
0950 **208L** MN2403-DR **1000L** MN2403-IBC

MARINE 12-SERIES

Marine oil

Description:

MANNOL Marine 12-series are high performance diesel engine oils developed for use on low sulphur distillate fuels in marine and industrial applications. Product is formulated to have excellent resistance to oxidation and viscosity increase over a long period of service. They have superior water separating properties and provide excellent corrosion protection. MANNOL Marine 1230/1240 are formulated with base oils having proven successful performance in diesel engines. The additive system is balanced to provide excellent resistance to thermal degradation under moderately severe operating conditions. They provide good engine cleanliness and superior wear protection.

Range: 1230 - SAE 30, 1240 - SAE 40.

Meets the requirements/specifications:

API CF, TBN 12.

Product Characteristics:

Test	Method	Unit	Result	
SAE-class			30	40
Density at 15°C	D 1298	kg/m³	900	896
Viscosity at 100°C	D 445	CSt	11,5	14,42
Viscosity index	D 2270		92	92
Flash point COC	D 92	°C	220	224
Pour point	D 97	°C	-10	-10
TBN	D 2896	gKOH/kg	12,0	12,88

Volume/weight:/Art.-Nr.:

1230 **208L** MN2404-DR **1000L** MN2404-IBC
1240 **208L** MN2405-DR **1000L** MN2405-IBC

2406 MARINE 3040

Marine oil

Description:

MANNOL Marine 3040 is premium, extra high performance 30 TBN engine oil designed for use in the most severe residual-fuelled, medium-speed diesel engines used in marine and stationary power applications. These diesel engine oils have been specially formulated to provide outstanding residual fuel compatibility characteristics to deliver excellent engine cleanliness, especially in crankcase, camshaft areas, ring belt and piston under crowns. They provide excellent high temperature oxidation and thermal stability, low volatility, high load carrying properties and corrosion protection. MANNOL Marine 3040 have industry-leading thermal and oxidation stability.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			40
Density at 15°C	D 1298	kg/m³	906
Viscosity at 40°C	D 445	CSt	136,08
Viscosity at 100°C	D 445	CSt	14,02
Viscosity index	D 2270		99
Flash point COC	D 92	°C	224
Pour point	D 97	°C	-10
TBN	D 2896	gKOH/kg	31,80

Meets the requirements/specifications:

SAE 40, API CF, TBN 30, WÄRTSILÄ VASA 24TS-8, PERKINS, WÄRTSILÄ-SULZER 9ZL40/48.

Volume/weight:/Art.-Nr.:

208L MN2406-DR **1000L** MN2406-IBC

2407 MARINE X70

Marine oil

Description:

MANNOL Marine X70 is a superior quality, extra high performance, marine diesel engine cylinder oil. This bold new approach in cylinder lubricant technology provides maximum protection from adhesive and corrosive wear at the higher operating temperatures and pressures of today's modern crosshead engines. MANNOL Marine X70 employs additives with substantially greater thermal stability and superior acid-corrosion protection. Using unique formulation technology, this higher viscosity is attained with little to no use of thermally less stable, deposit-producing bright stock.

Product Characteristics:

Test	Method	Unit	Result
SAE-class			50
Density at 15°C	D 1298	kg/m³	920
Viscosity at 100°C	D 445	CSt	20-23
Viscosity index	D 2270		90
Flash point COC	D 92	°C	205
Pour point	D 97	°C	-12
TBN	D 2896	gKOH/kg	70,0

Meets the requirements/specifications:

SAE 50, API CF, TBN 70.

Volume/weight:/Art.-Nr.:

208L MN2407-DR **1000L** MN2407-IBC



UNIVERSAL MULTI-MoS2 GREASE EP2



Description:

MANNOL Universal Multi-MoS2 Grease EP2 (KPF2K-30) is an extraordinary ageing stable, lithium based fat with excellent corrosion prevention qualities. The grease is made of high quality basic oil and uses additives like molybdenum disulphide to improve emergency run qualities, corrosion prevention and pressure durability. MANNOL Universal Multi-MoS2 Grease EP2 is a multipurpose grease, formulated for all lubrication places in vehicles, construction machines, agricultural machinery and mechanical engineering. This grease is particularly suitable for rolling and sliding bearings and joint lubrication with slow and/or oscillating movements. The operating temperature range of MANNOL Universal Multi- MoS2 Grease EP2 lies between -30 °C and +130 °C.

Volume/weight:/Art.-Nr.:

100gr	8099	**800gr**	8103
400gr	8107	**18kg**	8115

HIGH TEMPERATURE GREASE LC2



Description:

MANNOL High Temperature Grease LC2 (KP2P-35) is unique extremely heat resistant grease, developed for long-lasting lubrication of ball and roller bearings under high thermal and mechanical loads. Operating temperature: from -35 °C to +170 °C. Recommended for: various units of trucks operating in conditions of medium and high loads, such as: wheel bearings (axle bearings), bearing propeller shaft, axle drive, towing devices, trucks tailgate, wheel hubs, cardans, knuckle, wheel suspension, lifting devices, hand brake actuators, bearing body trucks, trailers, for wheel bearings and generators, clutch release bearings, brake cylinders, bearings, fans, electric motors, in dry and wet sections of paper machines, automatic washers, etc.

Volume/weight:/Art.-Nr.:

100gr	8100	**800gr**	8108
400gr	8104	**18kg**	8112

UNIVERSAL LONG TERM GREASE WR2



Description:

MANNOL Universal Long Term Grease WR2 (KP2K-30) is made of high quality basic oils under use of lithium soaps. It's a multipurpose, extreme pressure grease, formulated for lubrication of rolling and sliding bearings and other lubrication places on vehicles, industrial machines, boots, construction machines and agricultural machinery, operating under the most severe conditions (water, heat, dust and other pollution). Grease offers extraordinary aging stability and excellent anticorrosion properties. These qualities in connection with stable worked cone penetration and its excellent wear protective characteristic allows a remarkable long time lubrication. The operating temperature range of MANNOL Universal Long Term Grease WR2 lies between -30 °C and +120 °C.

Volume/weight:/Art.-Nr.:

100gr 8097 **800gr** 8101
400gr 8105 **18kg** 8113

UNIVERSAL MULTIPURPOSE GREASE MP2



Description:

MANNOL Universal Multipurpose Grease MP2 (K2K-30) is made of high-quality oils under use of lithium soaps. Well chosen additives lead to remarkable stable worked cone penetration, ageing stability, good corrosion prevention and excellent wear protection qualities. MANNOL Universal Multipurpose Grease MP2 is formulated for all lubrication places in vehicles, construction machines, agricultural machinery and general mechanical engineering. The operating temperature range of MANNOL Universal Multipurpose Grease MP2 lies between -30 °C and +120 °C.

Volume/weight:/Art.-Nr.:

100gr 8098 **800gr** 8102
400gr 8106 **18kg** 8114

LOW VISCOSITY GREASE



Description:

MANNOL Low Viscosity Grease Li-EP 00/000 (KP00K-40) is a lithium-complex semi-liquid grease for lubrication of low-speed gearboxes and centralized lubrication systems in trucks, meeting the requirements of Daimler-Benz MB264 and MAN TL283. Made on the basis of high-quality mineral oils, Lithium-12-Hydro xystearate as thickener and corrosioninhibitors, it provides optimal adhesion properties, withstands high loads, has high waterresistance and ensures a reliable lubrication of system components.

Volume/weight:/Art.-Nr.:

500gr 9985 **5L** 9986 **18kg** 9987

1101 KETTENOEL

Chainsaw oil



Description:

Mannol Kettenoel is highly refined oil on a mineral base, designed for lubrication of cutting chain saws. The oil has high adhesion properties, which ensures good adhesion of oil to the chain during operation. High anti-wear and lubricity characteristics extend the life of the chain. Greasing of the chain can be made both directly by immersing it in a container with the oil, and by an automatic oil supply. Ensures reliable lubrication up to -15 °C. Designed for the lubrication of chains of both petrol and electric saws.

Meets the requirements/specifications:

ISO 100.

Product Characteristics:

Test	Method	Unit	Result
Density at 15°C	D 1298	kg/m³	890
Viscosity at 40°C	D 445	CSt	105,40
Viscosity at 100°C	D 445	CSt	11,20
Viscosity index	D 2270		90
Flash point COC	D 92	°C	220
Pour point	D 97	°C	-28

Volume/weight:/Art.-Nr.:

1L MN1101-1
4L MN1101-1
10L MN1101-10
20L MN1101-20
60L MN1101-60
208L MN1101-DR

THE CONCISE GUIDE TO LUBRICANTS

The development of ultra-modern engine technology, with high performance density, minimal oil volume and oil change intervals of up to 30,000 km in the passenger car sector, would be inconceivable without advanced high performance lubricants. The lubricant "engine oil" is an integral component of the engines currently costing between Euro 5,000 and 15,000 on modern vehicles.
This fact alone should be reason enough not to be tempted to make false economies. The operating life of an engine depends substantially on the basic oil used, and on the viscosity of the engine oil. Whether the oil takes 2.8 seconds to reach the most remote point of the engine at low temperatures in the case of 0W-XX oils or 48 seconds in the case of 15W-XX oils has a decisive influence on the engine's operating life. If the engine is not lubricated thoroughly, the metallic surfaces which slide against each other will make contact. The engine service life is shortened significantly as a result. In the field of lubrication technology, this process is referred to as mixed friction. You, the owner of a vehicle, need to play your part in keeping any periods of mixed friction in the engine as short as possible. Advantages of synthetic engine oils: easier starting, better flow properties at low temperatures, superior wears protection behaviour, greater stability at high temperatures, lower fuel and oil consumption.

What do the individual figures on oil containers mean? Viscosity is the best known variable according to which lubricating oils are classified. It expresses the degree of internal friction of oil as it flows.
When oil is cold, its internal friction is high (high viscosity). The warmer the oil becomes, the lower its internal friction (low viscosity).
The change in viscosity along with the change in temperature may vary from one grade of oil to the next; this is denoted by the viscosity index (VI), a non-dimensional numerical value. The higher the VI, the lower the change in viscosity as the temperature rises.

SAE categories
Engine and transmission oils are described by means of SAE categories (SAE = Society of Automotive Engineers), which are used as a form of viscosity designation. Two series of designations are used.
The letter "W" stands for winter. Figures such as 0W, 5W, 10W, 15W, 20W and 25W at engine oils such as 70W, 75W, 80W, 85W, 90W, 140W at transmission oils describe a specified flow behaviour based on the maximum low-temperature viscosity, the maximum limit point temperature and the minimum viscosity at 100°C. The second figure after the "W", such as 20, 30, 40, 50, 60 at engine oils such as 80, 85, 90, and 140 at transmission oils denote viscosity of engine and transmission oils at a temperature of 100°C. As these temperatures do not adequately reflect the conditions in which engine oils are used, the high temperature viscosity HTHS (high temperature high shear) at 150°C at high shear (high engine speed) is calculated. The purpose of determining the limit values of HTHS is that multigame oils with VI improvers likewise assure the necessary degree of lubricating reliability at high oil temperatures and high engine speeds.

Performance categories
There are numerous test specifications and testing methods for determining the performance of engine oils in realistic test runs. Various vehicle engines are used for test purposes. The US classifications of the API, the European specifications of the ACEA committee, international specifications of ILSAC and the specifications of the individual vehicle manufacturers are in common use worldwide.

API (American Petroleum Institute)
The "American Petroleum Institute" divides engine oils into two performance categories: the classification for gasoline or spark ignition engines denoted by the letter "S" (Service Classes), and the classification for diesel engines denoted by the letter "C" (Commercial Classes).
A further letter, from an ascending alphabetical sequence, is then appended to the initial "S" or "C" to indicate the performance level. The highest classification currently in use for spark-ignition engines are API SN. In the case of diesel engines, API CK-4, represents the highest performance level.
The currently valid performance categories:
•API SN, SM, SL, SJ
•API CK-4, CJ-4, CI-4+, CI-4, CH-4, CG-4, CF-4, CF
In connection with the API classifications it should be noted that the tests are designed predominantly for US vehicles and their operating conditions.
The API classifications are consequently of only limited use for European countries.

ACEA (Association des Constructeurs Europeens d'Automobiles)
The ACEA specifications describe the minimum requirements for present-day, ultramodern engine oils for motor vehicles; these are the toughest in the world. The ACEA committee comprises European vehicle manufacturers, the European Association of Lubricant Manufacturers, additives manufacturers and test developers.
Engine oils are divided into four performance categories in this case:
• ACEA A = for spark-ignition or gasoline engines
• ACEA B = for diesel engines in passenger cars and light commercial vehicles
• ACEA C = for gasoline engines or diesel engines with Exhaust fume follow-up treatment e. g. diesel particulate filter
• ACEA E = for diesel engines in heavy commercial vehicles
The letters "A", "B", "C" or "E" are then followed by a digit, e.g. 1, 2, 3, 4 or for commercial vehicles 5, 6, 7, 9, which serves as an indication of the oil's performance. It is not necessarily the case that the higher the digit, the higher the quality (see table "ACEA-Specifications"). In addition, the digit indicating the performance level for the oil industry is followed by the year of introduction and possibly by the issue reference.

ILSAC (International Lubricants Standardization and Approval Committee)
ILSAC is formed in 1992 by AAMA (American Automobile Manufacturers Association, representatives of Ford Motor Company and General Motors Corporation) and JAMA (Japan Automobile Manufacturers Association) to define the need, parameters, licensing and administration of lubricant specifications.

ILSAC standards are divided into five performance categories:
• ILSAC GF-1 standard indicates the oil meets both API SH and the Energy Conserving II (EC-II) requirements.
• ILSAC GF-2. The oil must meet both API SJ and EC-II requirements. The GF-2 standards require 0W-30, 0W-40, 5W-20, 5W-30, 5W-40, 5W-50, 10W-30, 10W-40 and 10W-50 motor oils to meet stringent requirements for phosphorus content, low temperature operation, high temperature deposits and foam control.
• ILSAC GF-3 oil must meet both API SL and the EC-II requirements. The GF-3 standard has more stringent parameters regarding long-term effects of the oil on the vehicle emission system, improved fuel economy and improved volatility, deposit control and viscosity performance. The standard also requires less additive degradation and reduced oil consumption rates over the service life of the oil.
• ILSAC GF-4 is similar to API SM service category, but it requires an additional sequence VIB Fuel Economy Test (ASTM D6837).
• ILSAC GF-5. 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.

Vehicle manufacturers' specifications
Many European vehicle manufacturers consider the generally established oil specifications to be inadequate. The lubricant "engine oil" may have to satisfy additional requirements, e.g. for problem lubricating scenarios or extended maintenance intervals. The vehicle manufacturers want to know more about the composition of each oil, and this naturally means extra costs for the mineral oil industry. If the lubricant satisfies the requirements tested by the vehicle manufacturer, the oil company's product is approved by name for a specified period. The oil manufacturer may then use the specific vehicle manufacturer's standard for promotional purposes on its containers (see table "Which oil for which manufacturer release?").

Miscibility of engine oils
As a general principle, all conventional engine oils on the market, whether fully synthetic, partly synthetic, synthetic technology and mineral, may be combined. However, the performance of engine oil is determined by the weakest link in the chain. In other words, the quality of brand oil is significantly impaired by incorporating inferior or different basic oils. You should therefore always carry a container of the same grade of oil in your car, for topping up whenever necessary.

Low-viscosity oils
The designation "low-viscosity oil" depends not on the grade of basic oil used (fully synthetic, semi-synthetic), but solely on the low-temperature viscosity.
Low-viscosity oils are year-round oils with a low-temperature viscosity of SAE 0W-XX, 5W-XX and 10W-XX. Low-viscosity engine oils reduce the friction in the engine, thus saving fuel. The engine in addition becomes fully lubricated more rapidly, significantly reducing wear and extending its operating life.

Engine oils with MoS2
Engine oils with MoS2 additives are specially developed by MANNOL. The additive "MoS2" (molybdenum sulphide), which protects against wear, has been added to the engine oil, giving it a grey colour. MoS2 forms a high-load lubricating film on all rubbing and sliding surfaces. It reduces friction and assures smooth engine operation. This produces the following advantages: smoother engine running, reduced fuel consumption, low oil consumption, scientifically proven reduction in rate of wear, fewer malfunctions and outstanding emergency-running properties.
MANNOL also supplies this agent under the name of "Molibden Additive". This additive can be incorporated into all conventional engine oils, to make use of the positive properties of MoS2 lubrication.

Diesel engine oils
Our highly advanced diesel engine oils have been formulated specifically with a view to handling the higher soot load from diesel engines. You can continue to use your vehicle right up to the next oil change appointment, safe in the knowledge that contaminating particles will be collected, carried away and filtered out by the oil.

Mineral engine oils
Engine oils are conventionally made from mineral oils. However, these oils are limited in terms of their performance capability due to increasing requirements such as extended oil change intervals, high engine output and demands for low-viscosity properties. Typical viscosities: 10W-40, 15W-40 or 20W-50.

Semi-synthetic engine oils
Semi-synthetic engine oils are a blend of mineral and synthetic basic oils. They improve Cold starting properties keep the engine clean and afford excellent protection against wear. Typical viscosity category: SAE 10W-40.

HC Synthese engine oils
HC Syntheses engine oils are based on oils which have been further processed at the refinery using elaborate methods. Through the constant further development of these base oils, it was possible to meet the high requirements of state-of-the-art engine design. These days a lubricant using this technology is required in almost all new vehicles. Typical viscosity categories: SAE 5W-XX or 10W-XX.

Fully synthetic engine oils
Synthetic base oils nowadays only sometimes serve as the basis and prerequisite for advanced engine technology. Despite the increasing performance density, they enable long oil change intervals, lower oil and fuel consumption as well as a long engine service life. For the most part these days, the fully synthetic base oils are replaced by modern synthetic technology base oils for the engine/lubricant development. Typical viscosity categories: SAE 0W-XX, 5W-XX.

ACEA-SPECIFICATIONS

ACEA-Specifications	Use	HTHS-Viscosity	Sulphate-Ash %	Phosphor in %	Sulfur in %	Low-SAPS*	Mid-SAPS*	Full-SAPS*
A1	Gasoline Engines	≥2,9 ≤3,5mPa.s	≤1,3					X
A2[1]	Gasoline Engines	≥3,5 mPa.s	≤1,5-1,6					X
A3	Gasoline Engines	≥3,5 mPa.s	≤1,5-1,6					X
A5	Gasoline Engines	≥2,9 ≤3,5mPa.s	≤1,6					X
B1	Diesel Engines and Light Trucks	≥2,9 ≤3,5mPa.s	≤1,3					X
B2[1]	Diesel Engines and Light Trucks	≥3,5 mPa.s	≤1,5-1,6					X
B3	Diesel Engines and Light Trucks	≥3,5 mPa.s	≤1,5					X
B4	Diesel Engines and Light Trucks	≥3,5 mPa.s	≤1,5-1,6					X
B5	Diesel Engines and Light Trucks	≥2,9 ≤3,5mPa.s	≤1,6					X
E2	Utility vehicles and Building machines	≥3,5 mPa.s	≤2,0					X
E3[1]	Utility vehicles and Building machines	≥3,5 mPa.s	≤2,0					X
E4	Utility vehicles and Building machines	≥3,5 mPa.s	≤2,0					X
E5[1]	Utility vehicles and Building machines	≥3,5 mPa.s	≤2,0					X
E6	Utility vehicles and Building machines with exhaust gas aftertreatment system (DPF*)	≥3,5 mPa.s	≤1,0	≤0,08	≤0,3	X		
E7	Utility vehicles and Building machines	≥3,5 mPa.s	≤2,0					X
E9	Utility vehicles and Building machines with exhaust gas aftertreatment system (DPF*)	≥3,5 mPa.s	≤1,0	≤0,12	≤0,4	X		
C1	Gasoline Engines and Diesel Engines with exhaust gas aftertreatment system (DPF*)	≥2,9 mPa.s	≤0,5	≤0,05	≤0,2	X		
C2	Gasoline Engines and Diesel Engines with exhaust gas aftertreatment system (DPF*)	≥2,9 mPa.s	≤0,8	≥0,07≤ 0,09	≤0,3		X	
C3	Gasoline Engines and Diesel Engines with exhaust gas aftertreatment system (DPF*)	≥3,5 mPa.s	≤0,8	≥0,07≤ 0,09	≤0,3		X	
C4	Gasoline Engines and Diesel Engines with exhaust gas aftertreatment system (DPF*)	≥3,5 mPa.s	≤0,5	≤0,09	≤0,2	X		

1) Specification withdrawn in October 2004. Replaced by superseding specifications: ACEA A3; B3 or B4; E7

*DPF = Diesel particle filter

'SAPS = Chemical limits Sulphate-Ash, Phosphor, Sulfur

WHICH OIL FOR WHICH MANUFACTURER RELEASE?

Manufacturer	Motor	Release-No	ACEA	Use	MANNOL Engine Oil Recommendations
BMW BMW Longlife-04 includes: BMW Longlife-01 BMW Longlife-98 BMW Special oil BMW Longlife-01 includes: BMW Longlife-98 BMW Special oil BMW Longlife-98 includes: BMW Special oil	Gasoline/Diesel	Special oil	A2/A3/B3	for Gasoline/Diesel up to 1998	Classic Diesel Extra Defender
		Longlife-98	A3/B3	for Gasoline/Diesel up to year of construction 2001	Legend+Ester Elite Extreme Diesel Turbo
	Gasoline	Longlife-01	A3/B3/B4	specified for gasoline engines from 2001	Legend+Ester Elite Extreme Energy
		Longlife-04	A3/B3/B4	for gasoline engines from 06.2003	Energy Combi LL Diesel TDI
	Diesel	Longlife-01	A3/B3/B4	for Diesel engines from 2002	Diesel Turbo
		Longlife-04	A3/B3/B4, C3	for Diesel engines with and without DPF	Energy Combi LL Diesel TDI
Fiat 9.55535-S1 9.55535-S2 9.55535-H2 9.55535-M2 9.55535-N2 9.55535-G1	Gasoline	9.55535-H2	A3/B4	for gasoline engines until model year 2008	Elite Extreme
		9.55535-S2	C3	for gasoline engines for model year 2008	7701 O.E.M.
	Diesel	9.55535-M2	A3/B4	for Diesel engines with and without DPF until model year 2008	Diesel TDI
		9.55535-N2	A3/B4	for Diesel engines, especially Multi-Jet with and without DPF	Diesel TDI
		9.55535-S1	C2	for Diesel engines from model year 2008	Diesel TDI
	Gas CNG	9.55535-G1	A1/B1	for CNG-engines until model year 2008	7707 O.E.M.
Ford/Jaguar WSS-M2C913C includes: WSS-M2C 913B WSS-M2C 913A WSS-M2C 913A1 WSS-M2C 934-B	Gasoline/Diesel		A3/B3	Gasoline and diesel engines up to 7/98	Elite Diesel Turbo Extreme Classic Diesel Extra Defender
		WSS-M2C 913-B WSS-M2C 913-A WSS-M2C 913-A1	A1/B1	Gasoline and diesel engines from 7/98	7707 O.E.M.
	Diesel	WSS-M2C 917-A	A3/B3	1.9 TDI VW-unit injector Diesel engines Ford Galaxy until 2006	Diesel Turbo Diesel TDI
Honda	Gasoline/Diesel		A3/B3	Gasoline and diesel engines without DPF	Elite Extreme
	Diesel		C2	Diesel engines with DPF	Diesel TDI
Mazda	Gasoline/Diesel		A1/B1	Gasoline and diesel engines without DPF, depending upon type	7707 O.E.M.
	Diesel		A5/B5	Mazda 3 1.6 Diesel engines with DPF until model year 2009	7703 O.E.M.
Mercedes-Benz 229.5 includes: 229.3 229.1 229.3 includes: 229.1 229.51 includes: 229.31	Gasoline/Diesel without DPF	229.1	A2/A3/B2/B3	normal performance	Energy Classic Defender Special Diesel
		229.3	A3/B3/B4	high performance	Legend+Ester Elite Extreme
	Diesel engines with and without DPF	229.31	A3/B4, C3	high performance; DPF	Energy Combi LL Diesel TDI
		229.51	A3/B4, C3	very high performance; DPF	Energy Combi LL Diesel TDI
Mitsubishi	Gasoline/Diesel		A3/B4	Gasoline and diesel engines without DPF	Elite Extreme Diesel Turbo
	Diesel		C2/C3	Diesel engines with DPF (not for Pajero/ Shogun 3,2 DID with DPF from model year 2007)	Energy Formula JP

Legend: DPF = Diesel particle filter (mark in service data leaf: 7GG); WIV = extended maintenance interval (mark: QG1);

WHICH OIL FOR WHICH MANUFACTURER RELEASE?

Manufacturer	Motor	Release-No	ACEA	Use	MANNOL Engine Oil Recommendations
Opel/Saab dexos2 ™ backwards compatible includes: GM-LL-A-025 GM-LL-B-025	Gasoline/Diesel		A3/B3/B4	Gasoline and diesel engines depending upon type until model year 2005	Elite Extreme 7702 O.E.M. 7711 O.E.M.
		dexos2 ™	C3	Gasoline and diesel engines with and without DPF	Diesel TDI 7701 O.E.M.
Peugeot/Citroen B71 2290 B71 2296 B71 2294	Gasoline/Diesel	B71 2296 B71 2294	A3/B3/B4	Gasoline and Diesel engines until model year 1999 depending upon type and application (also flexible intervals)	Extreme Defender
		B71 2290	A1/B1, A5/B5, C2	Gasoline and diesel engines from model year 1999 with and without DPF, depending upon type and application (also flexible intervals)	Diesel TDI 7703 O.E.M.
Porsche A40 C30	Gasoline	A40	A3/B4	Gasoline engines without Cayenne V6	Elite Extreme 7711 O.E.M.
	Gasoline/Diesel	C30	C3	Gasoline engine Cayenne V6 and Diesel engines	Energy Combi LL
Renault/Dacia RN 0700 RN 0710 RN 0720	Gasoline/Diesel	RN 0700	A3/B4	Gasoline and diesel engines without DPF	Classic Elite Extreme 7711 O.E.M.
		RN 0710	A3/B4	Gasoline and diesel engines without DPF without Renault Laguna III 1.5 dci (engine type K9K); for 2.2 dci (engine type G9T with DPF)	Elite Extreme 7711 O.E.M.
Toyota	Gasoline		A3/B3/B4	Gasoline and diesel engines	Energy Formula JP Elite Extreme Diesel Turbo
	Diesel		C2	Diesel engines with DPF, depending upon type and application (also flexible intervals)	Energy Combi LL Diesel TDI
VW **Audi** **Seat** **Skoda** VW 504 00/507 00 includes: VW 500 00/501 01/ 502 00/503 00/ 503 01/505 00/ 505 01/506 00/ 506 01	Gasoline/Diesel normal intervals	500 00	A3	Gasoline engines, normal performance	Classic Defender Special
		501 01	A3	Gasoline engines, higher performance	Classic Defender Special
		502 00	A3	Gasoline engines, high performance	Elite Extreme Energy
		505 00	B3/B4	Diesel engines without unit injector system	Elite Diesel Turbo Extreme Energy Classic Diesel Extra Defender Special Diesel
		505 01	B3/B4	Diesel engines with + without unit injector system; Audi RS6	Diesel TDI
	Gasoline/Diesel Longlife Service (mark:QG1)	503 00	A5	Gasoline engines with WIV	Energy Combi LL
		503 01	A3	Gasoline engines with WIV: VW W8/12; Audi TT 165kw; S3, RS4; Audi A8 6.0	Energy Combi LL
		506 00	B5	Diesel engines without unit injector; with WIV	Energy Combi LL
		506 01	B5	Diesel engines with and without unit injector; with WIV	Energy Combi LL
	Gasoline/Diesel normal intervals and Longlife	504 00	A3	all gasoline engines, also WIV	Energy Combi LL
		507 00	B4, C3	all diesel engines, also WIV + DPF	Energy Combi LL

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2018/19

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