



LUBRICANTS AND MAINTENANCE FLUIDS

MANNOL[®]

MANNOL®



O F F I C I A L L U B R I C A N T P A R T N E R

TURN YOUR CAR INTO A SPORTS CAR



MANNOL and HRT racing team PARTNERSHIP

MANNOL has been working successfully with the HRT Racing Team since 2022 and the last two seasons have resulted in remarkable victories using MANNOL oils. The collaboration has demonstrated precision and reliability, resulting in high podium positions and unforgettable moments on the track.

With the start of this season, we are looking forward to new achievements and triumphs that will underline the strength of our long-lasting co-operation. MANNOL's high-quality products have proven their performance on the world's racetracks. Try them out for an outstanding result of your car!

In a world of progressive engineering, where standards and requirements are changing at lightning speed, we are working hard to live up to our customers' expectations and needs in over 180 countries.

UAB SCT Lubricants is the biggest manufacturer of automotive lubricants, fluids, greases and additives in Northern Europe.

Our factory's history dates back to 1962. Since then, a large-scale reconstruction and modernisation process has been initiated, the most notable result of which was the expansion of departments and equipment renewal.

Our competent sales team will help you at every stage of our relationship, help you choose the products that best suit your region, arrange transportation, and advise you on the best advertising and marketing options.

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MORE ENDURING



MORE PROTECTIVE

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Scan the QR code and find products suitable for your vehicle



This line consists of oils, from the most modern, manufactured in accordance with the latest API standards for the latest cars to budget oils of previous standards, designed for vehicles with mileage. It includes fully synthetic, semi-synthetic and mineral oils.



7920 HYBRID SP

**Advanced Fuel Saving Engine Oil.
Fully Synthetic**



Volume: / Art. Nr.:

		1L	MN7920-1
5L	MN7920-5	10L	MN7920-10
20L	MN7920-20	60L	MN7920-60
208L	MN7920-DR	1000L	MN7920-IBC

Innovative energy-saving low-viscosity engine oil of the latest generation on a bi-synthetic (PAO + esters) basis for modern petrol engines. Designed in accordance with the latest API SP and ILSAC GF-6 standards, it is especially recommended for hybrid cars, but it is also suitable for non-hybrid, requiring oils of such viscosity and with similar performance properties. LSPI protection.

7722 LONGLIFE 508/509

**Advanced Fuel-Saving Engine Oil.
Fully Synthetic**



Volume: / Art. Nr.:

		1L	MN7722-1
5L	MN7722-5	10L	MN7722-10
20L	MN7722-20	60L	MN7722-60
208L	MN7722-DR	1000L	MN7722-IBC

Innovative energy-saving low-viscosity, fully synthetic (PAO-based) premium engine oil for the latest models of VOLKSWAGEN turbocharged petrol (distributed or direct injection) and diesel engines equipped with petrol (GPFs) or diesel (DPFs) particulate filters. LSPI protection.

Specifications:

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

HONDA 08232-P99S1LHE
HONDA 08216-99974
HONDA 08215-99974
HONDA Ultra Green
NISSAN Hybrid engine
KLANM-01A04 Extra Save X Eco

MITSUBISHI MZ102661
MITSUBISHI MZ102662
MITSUBISHI DiaQueen Eco Plus
TOYOTA 08880-11005

Specifications:

**SAE 0W-20
API SP
API SN Plus
API SP (RC)
ACEA C6-21
ACEA C5-21
ILSAC GF-6A**

VW 508 00
VW 509 00
VW TL 52 577
PORSCHE C20



7918 LEGEND ULTRA

Premium Ester-Containing Engine Oil.
Fully Synthetic



Volume: / Art. Nr.:

1L	MN7918-1	4L	MN7918-4
5L	MN7918-5	10L	MN7918-10
20L	MN7918-20	60L	MN7918-60
208L	MN7918-DR	1000L	MN7918-IBC

Innovative energy-saving premium bi-synthetic engine oil (PAO + esters) for modern petrol engines. Designed to meet the requirements of American, Japanese and Korean car manufacturers. LSPI protection.

7921 LEGEND FORMULA C5

Premium PAO-Based Engine Oil.
Fully Synthetic



Volume: / Art. Nr.:

		1L	MN7921-1
5L	MN7921-5	10L	MN7921-10
20L	MN7921-20	60L	MN7921-60
208L	MN7921-DR	1000L	MN7921-IBC

Innovative energy-saving, low-viscosity bi-synthetic (PAO + esters) premium engine oil for the latest models of turbocharged petrol engines (multipoint or direct injection) with gasoline particulate filters. LSPI protection.

7730 LEGEND 504/507

Longlife Engine Oil.
Fully Synthetic



Volume: / Art. Nr.:

1L	MN7730-1	5L	MN7730-5
20L	MN7730-20	60L	MN7730-60
208L	MN7730-DR	1000L	MN7730-IBC

Innovative energy-saving bi-synthetic (PAO + ester) premium engine oil with improved low-temperature properties for modern petrol and diesel engines (including direct injection) with and without turbocharging, including those equipped with pump-injectors (Pumpe-Düse).

Specifications:

SAE 0W-20
API SP (RC)
ILSAC GF-6A

HONDA HTO-06
GM dexos1 Gen2/6094M
CHRYSLER MS-6395/MS-13340
JAGUAR STJLR.51.5122
LAND ROVER STJLR.51.5122
FORD WSS-M2C947-A
FORD WSS-M2C947-B1

INFINITI
LEXUS
MAZDA
SUZUKI

Specifications:

SAE 0W-20
API SP (RC)
ACEA C5

MB 229.71
BMW LL-17FE+
VOLVO VCC RBS0-2AE (Service Fill)
GM dexos1 Gen2/dexosD/6094M
JAGUAR STJLR.51.5122
LAND ROVER STJLR.51.5122
HONDA HTO-06

CHRYSLER MS-6395
CHRYSLER MS-13340
FORD WSS-M2C947-A
FORD WSS-M2C947-B1
OPEL OV0401547

Specifications:

SAE 0W-30
API SN
ACEA C3
ACEA C2

VW 504 00
VW 507 00
VW TL 52545
BMW LL-04
MB 229.52/229.51
MB 229.31
PORSCHE C30

7919 LEGEND EXTRA

Premium PAO-Based Engine Oil.
Fully Synthetic



Volume: / Art. Nr.:

1L	MN7919-1	4L	MN7919-4
5L	MN7919-5	10L	MN7919-10
20L	MN7919-20	60L	MN7919-60
208L	MN7919-DR	1000L	MN7919-IBC

Innovative universal bi-synthetic (PAO+esters) premium engine oil designed for modern petrol and diesel engines with and without turbocharging of MERCEDES-BENZ, BMW, FORD etc. passenger cars, lightweight off-road vehicles and light trucks.

Specifications:

SAE 0W-30
API SN Plus
API SP
ACEA C2
ACEA C3

BMW LL-12FE
MB 229.61
FORD WSS-M2C950-A
OPEL OV0401547
PSA B71 2290
PSA B71 2312

7922 ENERGY FORMULA LR

Premium Synthese Engine Oil.
Fully Synthetic



Volume: / Art. Nr.:

1L	MN7922-1	5L	MN7922-5
20L	MN7922-20	60L	MN7922-60
208L	MN7922-DR	1000L	MN7922-IBC

Innovative universal energy-saving ester-containing fully synthetic premium engine oil specially developed for diesel and petrol engines of LAND ROVER and JAGUAR vehicles.

Specifications:

SAE 0W-30
ACEA C2

JAGUAR STJLR.03.5007
LAND ROVER STJLR.03.5007
FORD WSS-M2C950-A

7901 LEGEND+ESTER

Premium PAO-Based Engine Oil.
Fully Synthetic



Volume: / Art. Nr.:

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

Universal bi-synthetic (PAO + esters) premium engine oil designed for new generations of all types of engines. Designed in accordance with the requirements of German car manufacturers.

Specifications:

SAE 0W-40
API SN/CH-4
ACEA A3/B4

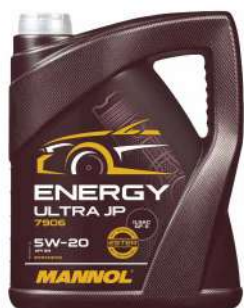
BMW LL-04
VW 502 00
VW 505 00
MB 229.5
MB 229.3
PORSCHE A40
FIAT 9.55535-M2

RENAULT RN0700
RENAULT RN0710
FORD WSS-M2C937-A
CHRYSLER MS-10725
CHRYSLER MS-12633
GM LL-A-025/LL-B-025

Additional recommended
Applications for AMG

7906 ENERGY ULTRA JP

Engine Oil for Asian and American Cars.
Synthetic



Volume: / Art. Nr.:

	1L	MN7906-1		
4L	MN7906-4	5L	MN7906-5	
20L	MN7906-20	60L	MN7906-60	
208L	MN7906-DR	1000L	MN7906-IBC	

Innovative energy-saving premium bi-synthetic engine oil (PAO + esters) for modern petrol engines. Designed to meet the requirements of American, Japanese and Korean car manufacturers.

Specifications:

SAE 5W-20
API SN
ACEA C5
ILSAC GF-5

FORD WSS-M2C948-A
FORD WSS-M2C948-B

7907 ENERGY COMBI LL

Longlife Engine Oil.
Fully Synthetic



Volume: / Art. Nr.:

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

Innovative universal multigrade bi-synthetic (PAO + esters) premium engine oil for modern petrol and diesel engines (including those with direct injection) with and without turbocharging, including those equipped with pump nozzles (Pumpe-Duse). Designed based on VW and DAIMLER requirements.

Specifications:

SAE 5W-30
API SN
ACEA C3

VW TL 52 195
VW 504 00 Approval
VW 507 00 Approval
MB-Approval 229.51
BMW LL-04
PORSCHE C30

7908 ENERGY PREMIUM

Advanced Fuel Saving Engine Oil.
Fully Synthetic



Volume: / Art. Nr.:

1L	MN7908-1	4L	MN7908-4	
5L	MN7908-5	7L	MN7908-7	
20L	MN7908-20	60L	MN7908-60	
208L	MN7908-DR	1000L	MN7908-IBC	

Innovative versatile all-synthetic ester-containing premium synthetic engine oil for modern diesel and gas turbocharged and non-turbocharged engines. Designed in accordance with the requirements of European car manufacturers.

Specifications:

SAE 5W-30
API SN/CH-4
ACEA C2
ACEA C3

VW 505 01
MB 229.51/229.52
MB 226.5/229.31
BMW LL-04
GM dexos2
RENAULT RN0710
RENAULT RN0700

7715 **LOGLIFE 504/507**

Premium Synthese Engine Oil



APPROVAL	APPROVAL
VW 504 00	VW 507 00

Volume: / Art. Nr.:

		1L	MN7715-1
4L	MN7715-4	5L	MN7715-5
5L _{Met.}	MN7715-5ME	10L	MN7715-10
20L	MN7715-20	60L	MN7715-60
208L	MN7715-DR	1000L	MN7715-IBC

Innovative universal premium bi-synthetic engine oil (PAO - based) for modern petrol and diesel engines of VW group cars (including direct injection) with and without turbocharging, including those equipped with pump-injectors (Pumpe-Düse). Designed for gasoline and diesel engines of EURO IV and EURO V wide fleet of vehicles (cars, light SUVs, vans and light trucks) of VW imposes additional requirements on motor oils.

Specifications:

SAE 5W-30
API SN
ACEA C3

VW 504 00 Approval
VW 507 00 Approval
VW TL 52 195
MB 229.51
BMW Longlife-04
PORSCHE C30

7909 **DIESEL TDI**

Synthetic Engine Oil



Volume: / Art. Nr.:

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

Innovative universal ester-containing fully synthetic premium engine oil for modern diesel and gasoline engines with and without turbocharging. Especially recommended for direct injection turbodiesel engines. Designed to meet VW requirements.

Specifications:

SAE 5W-30
API SN/CH-4
ACEA C3
ACEA C2

VW 505 01
BMW LL-04
MB 229.51/229.52
MB 229.31/226.5
GM dexos2
RENAULT RN0710
RENAULT RN0700

7511 **ENERGY**

Premium Ester-Containing Engine Oil.
Fully Synthetic



Volume: / Art. Nr.:

		1L	MN7511-1
4L	MN7511-4	5L	MN7511-5
7L	MN7511-7	10L	MN7511-10
20L	MN7511-20	60L	MN7511-60
208L	MN7511-DR	1000L	MN7511-IBC

Innovative universal ester-containing premium engine oil for modern petrol and diesel engines with and without turbocharging. Designed based on the requirements of European car manufacturers.

Specifications:

SAE 5W-30
API SN/CH-4
ACEA A3/B4

VW 502 00/505 00
VW 503 01/501 01
MB 229.3/229.5
BMW LL-98
RENAULT RN0710
RENAULT RN0700
FORD WSS-M2C913-B

7720 CERAMIC

Premium Synthese Engine Oil.
Fully Synthetic



Volume: / Art. Nr.:

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

Unique innovative fully synthetic premium engine oil with special anti-scuffing properties thanks to the addition of synthetic esters and hexagonal boron nitride h-BN (white graphite). Suitable for all types of car engines – diesel and petrol, four- and two-stroke.

Specifications:

SAE 5W-30
API SN Plus
ACEA C3
ACEA C2

VW 505 01/505 00
BMW LL-04
MB 229.51/229.52
MB 229.31
GM dexos2
PORSCHE C30
CHRYSLER MS-11106

FIAT 9.55535-S3
RENAULT RN17
PSA B71 2290
TOYOTA 08880-83388/08880-83389
IVECO 18-1811 CLASSE SC1

7701 ENERGY FORMULA OP

Premium Synthese Engine Oil.
Fully Synthetic



Volume: / Art. Nr.:

1L	MN7701-1	4L	MN7701-4
5L	MN7701-5	10L	MN7701-10
20L	MN7701-20	60L	MN7701-60
208L	MN7701-DR	1000L	MN7701-IBC

Premium synthese ester-containing engine oil, specially developed for petrol and diesel engines of CHEVROLET, OPEL and GM vehicles. Developed for cars and light trucks of European and other manufacturers that meet EURO III, IV, V standards and are equipped with catalysts (TWC) and particulate filters (DFP/FAP).

Specifications:

SAE 5W-30
API SN Plus
ACEA C3
ACEA C2

VW 505 00/505 01
BMW LL-04
MB 229.52/229.31
MB 229.51
GM dexos2
PORSCHE C30
CHRYSLER MS-11106

FIAT 9.55535-S3
RENAULT RN17
PSA B71 2290
TOYOTA 08880-83388/08880-83389
IVECO 18-1811 CLASSE SC1

7703 ENERGY FORMULA PSA

Premium Synthese Engine Oil.
Fully Synthetic



Volume: / Art. Nr.:

		1L	MN7703-1
4L	MN7703-4	20L	MN7703-20
208L	MN7703-DR	1000L	MN7703-IBC

Innovative, universal, energy-saving, ester-containing, fully synthetic premium engine oil, specially designed for petrol and diesel engines in PEUGEOT and CITROËN vehicles, with a focus both on heavy-duty requirements and extended engine oil change intervals.

Specifications:

SAE 5W-30
API SN/CH-4
ACEA C3
ACEA C2

PSA B71 2290
FIAT 9.55535-S1
FIAT 9.55535-S3

7706 ENERGY FORMULA RN

Premium Synthese Engine Oil.
Fully Synthetic



Volume: / Art. Nr.:

		1L	MN7706-1
4L	MN7706-4	10L	MN7706-10
20L	MN7706-20	208L	MN7706-DR

Fully synthetic ester-containing premium engine oil developed for diesel engines with DPF filters of the new generation of cars with and without a turbocharger and direct injection systems.

Specifications:

SAE 5W-30
ACEA C4

RENAULT RN0720
MB 226.51/229.51
MB 229.31
LAND ROVER STJLR.03.5005

7707 ENERGY FORMULA FR

Fully Synthetic Engine Oil



Volume: / Art. Nr.:

1L	MN7707-1	5L	MN7707-5
7L	MN7707-7	10L	MN7707-10
20L	MN7707-20	60L	MN7707-60
208L	MN7707-DR	1000L	MN7707-IBC

Innovative energy-saving ester-containing fully synthetic premium engine oil specially developed for modern diesel engines and a number of petrol engines in FORD and VOLVO vehicles, considering the requirements for heavy-duty operation and extended engine oil change intervals. The oil can be used in petrol and diesel engines of European and Asian car manufacturers requiring API SN and ACEA A5/B5 oils.

Specifications:

SAE 5W-30
API SN
ACEA A5/B5

FORD WSS-M2C913-D/-C
FORD WSS-M2C913-B/-A
VOLVO VCC 95200377 (Service Fill)
LAND ROVER STJLR.03.5003
JAGUAR STJLR.03.5003
FIAT 9.55535-G1
MB 229.6

7917 ENERGY FORMULA C4

Synthetic Engine Oil



Volume: / Art. Nr.:

		1L	MN7917-1
5L	MN7917-5	10L	MN7917-10
20L	MN7917-20	60L	MN7917-60
208L	MN7917-DR	1000L	MN7917-IBC

Innovative universal ester-containing synthetic premium engine oil for modern diesel and petrol engines with and without turbocharger equipped with particulate filters (DFP/FAP). The product is specifically designed for professional RENAULT car maintenance.

Specifications:

SAE 5W-30
API SN
ACEA C4

RENAULT RN0720
MB 226.51
MB 229.51
MB 229.31
NISSAN diesel engine
with DPF

7914 ENERGY FORMULA JP

Engine Oil for Asian and American Cars.
Fully Synthetic



Volume: / Art. Nr.:

1L	MN7914-1	4L	MN7914-4
5L	MN7914-5	7L	MN7914-7
20L	MN7914-20	60L	MN7914-60
208L	MN7914-DR	1000L	MN7914-IBC

Innovative energy-saving ester-containing fully synthetic premium engine oil for modern petrol engines. Designed in accordance with the requirements of American, Japanese and Korean car manufacturers specifically for engines with direct injection systems (GDI, D4, NEO-DI, CGI DISI, I-CDTI), turbocharged.

Specifications:

SAE 5W-30
API SN Plus
ILSAC GF-5

GM dexos1 Gen2
GM6094M
FORD WSS-M2C929-A
FORD WSS-M2C946-A
FORD WSS-M2C946-B1
CHRYSLER MS-6395
CHRYSLER MS-13340

FIAT 9.55535-CR1
HONDA HTO-06
LEXUS
MAZDA
SUZUKI
SSANGYONG

7709 FOR TOYOTA LEXUS

Fully Synthetic Engine Oil



Volume: / Art. Nr.:

1L	MN7709-1	4L	MN7709-4
20L	MN7709-20	60L	MN7709-60
208L	MN7709-DR	1000L	MN7709-IBC

Universal premium ester-containing synthetic engine oil specially developed for modern diesel and petrol engines of TOYOTA and LEXUS with variable valve timing technology VVT-i, with and without a turbocharger. Designed for multi-valve petrol engines of cars, SUVs, vans and light trucks, as well as light commercial vehicles, where the performance level API SN Plus (API SN), A5/B5 is required.

Specifications:

SAE 5W-30
API SN Plus
ACEA A5/B5

TOYOTA 08880-80845
FORD WSS-M2C913-D/-C
FORD WSS-M2C913-B/-A
LAND ROVER STJLR.03.5003
JAGUAR STJLR.03.5003
IVECO 18-1811 S1/-S2
FIAT 9.55535-G1
RENAULT RN0700

7713 FOR KOREAN CARS

Fully Synthetic Engine Oil



Volume: / Art. Nr.:

1L	MN7713-1	4L	MN7713-4
20L	MN7713-20	60L	MN7713-60
208L	MN7713-DR	1000L	MN7713-IBC

Innovative energy-saving ester-containing fully synthetic premium engine oil for modern HYUNDAI and KIA turbocharged and non-turbocharged petrol engines. Developed in accordance with the requirements of Korean car manufacturers specifically for engines with the variable valve timing system CVVT by HYUNDAI starting from 2L Beta I4 engine models, Alpha II DOHC.

Specifications:

SAE 5W-30
API SN/CH-4
ACEA A3/B4
ILSAC GF-5

FORD WSS-M2C929-A
FORD WSS-M2C946-A/-B1
CHRYSLER MS-6395
GM dexos1 Gen2
GM 6094M



7903 ELITE

Premium Ester-Containing Engine Oil.
Fully Synthetic



Volume: / Art. Nr.:

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

Innovative universal ester-containing fully synthetic premium engine oil for modern petrol and diesel engines with and without turbocharging, including "old" brands and high mileage. Designed based on the requirements of European producers.

Specifications:

SAE 5W-40
API SN/CH-4
ACEA A3/B4

MB 229.3/229.5
MB 226.5
BMW LL-01/LL-98
VW 502 00/505 00
JASO MA2
PORSCHE A40
PSA B71 2296

FIAT 9.55535-H2
FIAT 9.55535-Z2
CHRYSLER MS-10850
CHRYSLER MS-10896
CHRYSLER MS-12991
GM LL-A-025/LL-B-025
RENAULT RN0710
RENAULT RN0700



7904 DIESEL TURBO

Fully Synthetic Engine Oil



Volume: / Art. Nr.:

1L	MN7904-1	5L	MN7904-5
10L	MN7904-10	20L	MN7904-20
60L	MN7904-60	208L	MN7904-DR

Innovative ester-containing fully synthetic premium engine oil for modern high-performance turbo diesel engines. Developed in accordance with the requirements of the VW group.

Specifications:

SAE 5W-40
API CI-4/SN
ACEA A3/B4
JASO MA2

MB 226.5/229.3/229.5
VW 502 00/505 00
BMW LL-01/LL-98
GM LL-A-025/LL-B-025
FIAT 9.55535-M2/9.55535-N2
FIAT 9.55535-H2/9.55535-Z2
PSA B71 2294/B71 2296

RENAULT RN0700/RN0710
CHRYSLER MS-10725/MS-10850
CHRYSLER MS-10896/MS-12991
PORSCHE A40



7913 ENERGY FORMULA PD

HC Synthese Engine Oil.
Fully Synthetic



Volume: / Art. Nr.:

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

Innovative universal energy-saving ester-containing fully synthetic premium engine oil for modern diesel engines (including those with direct injection) and petrol engines with and without turbocharging, including those equipped with pump nozzles (Pumpe-Duse). Designed based on VW and DAIMLER requirements.

Specifications:

SAE 5W-40
API SN
ACEA C3
ACEA C2

MB 229.51/229.31
MB 226.5
GM dexos2
BMW LL-04
VW 505 00/505 01
FIAT 9.55535-S2
FIAT 9.55535-GH2

FORD WSS-M2C917-A
CHRYSLER MS-11106
PORSCHE A40
RENAULT RN0710
RENAULT RN0700

7915 EXTREME

Synthetic Engine Oil



Volume: / Art. Nr.:

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

Innovative universal ester-containing synthetic premium engine oil for modern petrol and diesel engines with and without turbocharging, including "old" brands and high mileage. Designed based on the requirements of European producers.

Specifications:

SAE 5W-40
API SN/CH-4
ACEA A3/B4

MB 229.5/229.3
MB 226.5
VW 502 00/505 00
BMW LL-01/LL-98
JASO MA2
PORSCHE A40
PSA B71 2296

CHRYSLER MS-10850
CHRYSLER MS-10896
CHRYSLER MS-12991
GM LL-A-025/LL-B-025
FIAT 9.55535-H2
FIAT 9.55535-Z2
RENAULT RN0710
RENAULT RN0700

7512 SPECIAL PLUS

Synthetic Blend Engine Oil



Volume: / Art. Nr.:

1L	MN7512-1	4L	MN7512-4
5L	MN7512-5	7L	MN7512-7
20L	MN7512-20	60L	MN7512-60
208L	MN7512-DR	1000L	MN7512-IBC

Hydro-synthetic ester-containing universal engine oil for all types of petrol engines. Designed to meet VW and DAIMLER requirements. Designed for petrol and diesel engines in a wide fleet of cars (cars, light utility vehicles, vans and light trucks) of European and other manufacturers.

Specifications:

SAE 10W-30
API SN
ACEA A3/B4

MB 229.1
VW 505 00
VW 501 01
ISUZU
KIA

7501 CLASSIC

HC Synthese Engine Oil



Volume: / Art. Nr.:

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

Universal ester-containing HC-synthese engine oil for modern petrol and diesel engines with and without a turbocharger, both multi-valve and direct injection, including "old" brands and high mileage vehicles. Designed according to the requirements of European manufacturers.

Specifications:

SAE 10W-40
API SN/CH-4
ACEA A3/B4
JASO MA2

VW 505 00
VW 502 00
VW 501 01
VW 500 00
MB 229.3
MB 229.1
PSA B71 2296
RENAULT RN0710
RENAULT RN0700



7507 DEFENDER

Semi-synthetic Engine Oil



Volume: / Art. Nr.:

1L	MN7507-1	4L	MN7507-4
5L	MN7507-5	7L	MN7507-7
20L	MN7507-20	60L	MN7507-60
208L	MN7507-DR	1000L	MN7507-IBC

Innovative universal ester-containing engine oil on a hydrosynthetic basis for petrol and diesel engines, both new and "old" brands and with a large mileage. Developed on the basis of the requirements of European manufacturers.

Specifications:

SAE 10W-40
API SN
ACEA A3/B4

MB 229.3
MB 229.1
VW 505 00
VW 502 00
VW 501 01
VW 500 00
PSA B71 2294
RENAULT RN0710
RENAULT RN0700



7504 DIESEL EXTRA

Semi-synthetic Engine Oil



Volume: / Art. Nr.:

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

Innovative universal ester-containing engine oil on a hydrosynthetic basis for diesel engines, both new and "old" brands and with high mileage. Specially designed for turbocharged engines. Designed for diesel engines in a wide fleet of cars (cars, light SUVs, vans and light trucks) of European and other manufacturers.

Specifications:

SAE 10W-40
API CH-4/SN
ACEA A3/B4

VW 505 00
VW 502 00
VW 501 01
VW 500 00
MB 229.3
MB 229.1
PSA B71 2296
RENAULT RN0710
RENAULT RN0700



7505 MOLIBDEN

Semi-synthetic Engine Oil



Volume: / Art. Nr.:

1L	MN7505-1	4L	MN7505-4
5L	MN7505-5	20L	MN7505-20
60L	MN7505-60	208L	MN7505-DR

Universal ester-containing engine oil on a hydro synthetic basis, specially developed for all types of petrol and diesel engines, including heavy-duty engines. Contains organic and inorganic molybdenum (MoS_2). Designed for gasoline and diesel engines in a wide fleet of cars (cars, light SUVs, vans and light trucks) of European and other manufacturers. Recommended for cars of "old" brands and with high mileage.

Specifications:

SAE 10W-40
API SN/CH-4

VW 501 01
VW 505 00

7902 RACING+ESTER
Premium Synthese Engine Oil.
Fully Synthetic



Volume: / Art. Nr.:

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

Universal bi-synthetic (PAO + esters) premium engine oil designed for new generations of all types of engines operating in harsh and extreme operating conditions. Designed to meet the requirements of manufacturers of sports and racing cars.

Specifications:
SAE 10W-60
API SN/CH-4
ACEA A3/B4

MB 229.1
VW 501 01
VW 505 00
FIAT 9.55535-H3
PSA B71 2300

7402 DIESEL
Universal Engine Oil



Volume: / Art. Nr.:

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

Highly refined ester-containing economy-class mineral engine oil for highly accelerated diesel engines with and without a turbocharger. Suits high mileage engines operating in various operating conditions. Intended for the maximum protection of diesel engines of a wide car fleet (passenger cars, light SUVs, minibuses and light trucks).

Specifications:
SAE 15W-40
API CH-4/SN
ACEA A3/B4

VW 505 00
VW 501 01
MB 229.1
MB 226.9
MAN 271
ALLISON C4

7405 UNIVERSAL
Universal Engine Oil



Volume: / Art. Nr.:

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

All-season ester-containing universal economy-class engine oil on a highly refined mineral basis for turbocharged and non-turbocharged petrol and diesel engines, including those with very high mileage, operating under various operating conditions.

Specifications:
SAE 15W-40
API SN/CH-4
ACEA A3/B4

VW 505 00
VW 502 00
VW 501 01
VW 500 00
MB 229.3/229.1
PSA B71 2294
RENAULT RN0700
RENAULT RN0710



7510 FAVORIT

Semi-synthetic Engine Oil



Volume: / Art. Nr.:

		1L	MN7510-1
4L	MN7510-4	5L	MN7510-5
20L	MN7510-20	60L	MN7510-60
208L	MN7510-DR	1000L	MN7510-IBC

Universal ester-containing engine oil on a hydro synthetic basis for petrol and diesel engines with and without turbocharging, modern, working in superheavy conditions, and "old" brands with high mileage. Recommended for use in engines of DAIMLER, MAN and VW vehicles.

Specifications:

SAE 15W-50
API SL/CH-4

MB 229.1
MB 228.1
MAN 271
VW 501 01
VW 505 00



7404 SAFARI

Synthetic Blend Engine Oil



Volume: / Art. Nr.:

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

Universal ester-containing economy-class engine oil, which is a mixture of synthetic components and a high purity mineral base, for modern highly accelerated petrol and diesel engines with and without a turbocharger used in difficult operating conditions and engines with a very high mileage used in various operating conditions.

Specifications:

SAE 20W-50
API SN/CH-4

7409 SAE 40

Universal Engine Oil

Volume: / Art. Nr.:

1L	MN7409-1	4L	MN7409-4
5L	MN7409-5	10L	MN7409-10
20L	MN7409-20	60L	MN7409-60
208L	MN7409-DR	1000L	MN7409-IBC

Specifications:

SAE 40
API CH-4/SJ

Specifications:

SAE 50
API CH-4

7407 SAE 50

Universal Engine Oil

Volume: / Art. Nr.:

		5L	MN7407-5
7L	MN7407-7	10L	MN7407-10
20L	MN7407-20	60L	MN7407-60
208L	MN7407-DR	1000L	MN7407-IBC

7408 SAE 60

Universal Engine Oil

Volume: / Art. Nr.:

		5L	MN7408-5
10L	MN7408-10	20L	MN7408-20
60L	MN7408-60	208L	MN7408-DR

Specifications:

SAE 60
API CH-4

A high-efficiency monograde mineral engine oils for heavy-load diesel-powered engines with and without a turbocharger operating under very harsh conditions.

A range of oils designed specifically for vehicles equipped with powerful diesel engines: heavy trucks and buses, construction, road and agricultural machinery. Includes oils of the most sought-after specifications, ranging from the most modern and viscosities from 5W-30 to 20W-50, sorted by UHPD/SHPD.

UHPD Ultra High Performance Diesel

SHPD Super High Performance Diesel



7101 TS-1 SHPD

Universal Truck Engine Oil



Volume: / Art. Nr.:

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

Multigrade mineral ester-containing engine oil with the addition of hydrosynthetic components for modern heavy-duty and high-speed turbocharged and non-turbocharged diesel engines operating under severe conditions. Especially designed to protect your equipment and get the most out of it, regardless of its operating conditions.

Specifications:

SAE 15W-40
API CH-4/SL
ACEA E7
ACEA A3/B4

MB 228.3/229.1
MAN M 3275-1
MTU Type 2
VOLVO VDS-2



7102 TS-2 SHPD

Universal Truck Engine Oil



Volume: / Art. Nr.:

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

Special multi-season, highly alloyed ester-containing mineral engine oil with the addition of hydrosynthetics for modern, heavy duty and high-speed diesel engines with and without turbocharging, operating in extremely difficult conditions (including, at high ambient temperatures). Designed to protect equipment and benefit most out of it under extreme loads.

Specifications:

SAE 20W-50
API CH-4/SL
ACEA E7
ACEA A3/B4

MB 228.3/229.1
MAN M 3275-1
MTU Type 2
VOLVO VDS-2



7103 TS-3 SHPD

Universal Truck Engine Oil

Volume: / Art. Nr.:

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

All-year-round mineral engine oil for modern heavy-duty and high-speed diesel engines with and without turbocharging operated in difficult conditions. Designed specifically to protect machinery and benefit most out of it regardless of operating conditions.



7104 TS-4 SHPD

Universal Truck Engine Oil



Volume: / Art. Nr.:

1L	MN7104-1	5L	MN7104-5
7L	MN7104-7	10L	MN7104-10
20L	MN7104-20	60L	MN7104-60
208L	MN7104-DR	1000L	MN7104-IBC

Innovative all-weather mineral-synthetic (esters + HC-synthes) engine oil for modern heavy duty and high-speed diesel engines with and without turbocharging, operated in difficult conditions. The oil complies with the Global Specification GLOBAL-DHD-1.



7105 TS-5 UHPD

Semi-synthetic Truck Engine Oil



Volume: / Art. Nr.:

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

Innovative all-weather semi-synthetic (esters + HC-synthes) engine oil for modern heavy duty and high-speed diesel engines with and without turbocharging, operated in difficult conditions. The oil complies with the Global Specification GLOBAL-DHD-1.

Specifications:

SAE 10W-40
API CH-4/SL
ACEA E7
ACEA A3/B4

MB 228.3/229.1
MAN M 3275-1
MTU Type 2
VOLVO VDS-2

Specifications:

SAE 15W-40
API CI-4 Plus
API CI-4/CH-4/SL
ACEA E7
ACEA A3/B4
JASO DH-1
GLOBAL DHD-1

CATERPILLAR ECF-2/ECF-1A
CUMMINS CES 20076/20077
CUMMINS CES 20078
DETROIT DIESEL 93K215
MACK EO-N/EO-M Plus
MAN M 3275-1
MB 228.3/228.1

MTU Type 2
RENAULT RLD-2
VOLVO VDS-3

Specifications:

SAE 10W-40
API CI-4 Plus
API CI-4/CH-4
ACEA E7
ACEA A3/B4
JASO DH-1
GLOBAL DHD-1

CATERPILLAR ECF-2/ECF-1-a
CUMMINS CES 20076/20077
CUMMINS CES 20078
DETROIT DIESEL 93K215
MACK EO-N/EO-M Plus
MAN M 3275-1
MB 228.1/228.3

MTU Type 2
RENAULT RLD-2
VOLVO VDS-3

7109 TS-9 UHPD NANO

Synthetic Truck Engine Oil



Volume: / Art. Nr.:

5L	MN7109-5	10L	MN7109-10
20L	MN7109-20	60L	MN7109-60
208L	MN7109-DR	1000L	MN7109-IBC

All-season ester-containing synthetic low-ash engine oil for the latest generation of highly loaded and high-speed turbocharged and non-turbocharged heavy-duty diesel engines using low-sulphur fuels. The oil complies with the GLOBAL-DHD-1 specification.

Specifications:

SAE 10W-40
API CJ-4/SN
ACEA E8
ACEA E11
JASO DH-2
GLOBAL DHD-1

MB 228.31/228.51
MAN M 3477/M 3575
MACK EO-N Plus
MACK EO-O Premium Plus
MTU Type 3.1
RENAULT RLD-3
VOLVO VDS-4

CATERPILLAR ECF-2/ECF-3
CUMMINS CES 20076/20077
CUMMINS CES 20078
DETROIT DIESEL DDC 93K218

7110 TS-10 UHPD

Synthetic Truck Engine Oil



Volume: / Art. Nr.:

		20L	MN7110-20
208L	MN7110-DR	1000L	MN7110-IBC

The universal all-season synthetic engine oil for modern high-load and high-speed diesel engines with and without turbocharging, operating in harsh conditions and at low ambient temperatures.

Specifications:

SAE 5W-40
API CI-4/SL
ACEA E7
ACEA E4

MB 228.5
MACK EO-N
MAN M 3277
MTU Type 3
RENAULT RLD-2
VOLVO VDS-3

7112 TS-12 SHPD

Semi-synthetic Truck Engine Oil



Volume: / Art. Nr.:

		7L	MN7112-7
20L	MN7112-20	60L	MN7112-60
208L	MN7112-DR	1000L	MN7112-IBC

All-weather semi-synthetic (HC synthesis) engine oil for modern heavy duty and high-speed diesel engines with and without turbocharging, operated in difficult conditions. Designed specifically to protect machinery and benefit most out of it regardless of operating conditions.

Specifications:

SAE 10W-30
API CI-4 Plus
API CI-4/CH-4/SL
ACEA E7
ACEA A3/B4
JASO DH-1
GLOBAL DHD-1

MB 228.1/228.3
MACK EO-M Plus/EO-N
MAN M 3275-1
MTU Type 2
RENAULT RLD-2
VOLVO VDS-3
CATERPILLAR ECF-1a/ECF-2

CUMMINS CES 20076/20077
CUMMINS CES 20078
DETROIT DIESEL 93K215



7114 TS-14 UHPD
Synthetic Truck Engine Oil



APPROVAL	APPROVAL	APPROVAL
MACK EOS-4.5	RENAULT RLD-3	VOLVO VDS-4.5

Volume: / Art. Nr.:			
	1L	MN7114-1	
5L	MN7114-5	7L	MN7114-7
20L	MN7114-20	60L	MN7114-60
208L	MN7114-DR	1000L	MN7114-IBC

All-weather ester-containing synthetic engine oil for heavy-duty and high-speed diesel engines with and without turbocharger, operating in difficult conditions. The oil has successfully passed road and laboratory tests at VOLVO, MACK and RENAULT centres and has their written approvals.



7115 TS-15 SHPD
Universal Truck Engine Oil

Volume: / Art. Nr.:			
	7L	MN7115-7	
10L	MN7115-10	20L	MN7115-20
60L	MN7115-60	208L	MN7115-DR

Special multi-season, highly alloyed mineral engine oil with the addition of hydrosynthetics for modern, heavy duty and high-speed diesel engines with and without turbocharging, operating in extremely difficult conditions (including, at high ambient temperatures) and for engines with high mileage. The oil complies with the Global Specification GLOBAL-DHD-1.



7117 TS-17 UHPD BLUE
Fully Synthetic Truck Engine Oil



APPROVAL
DAIMLER DTFR 15B120

Volume: / Art. Nr.:			
	5L	MN7117-5	
20L	MN7117-20	60L	MN7117-60
208L	MN7117-DR	1000L	MN7117-IBC

Energy-saving synthetic (PAO-based + Esters) engine oil for heavy duty and high-speed diesel engines of the latest generation with and without turbocharging, operating in severe conditions on low sulphur fuel. Designed specifically to protect machinery and benefit most out of it regardless of operating conditions.

Specifications:

SAE 15W-40
API CK-4
ACEA E11 -22
ACEA E7 -22
ACEA E9 -16
JASO DH-2

VOLVO VDS-4.5 Approval
MACK EOS-4.5 Approval
RENAULT RLD-3 Approval
MB 228.31
CATERPILLAR ECF-3
CUMMINS CES 20086
DETROIT DIESEL DDC 93K222
MAN M 3775

Specifications:

SAE 20W-50
API CI-4 Plus
API CI-4/CH-4/SL
ACEA E7
ACEA A3/B4
JASO DH-1
GLOBAL DHD-1

MACK EO-N/EO-M Plus
MB 228.1/228.3
MAN M 3275-1
MTU Type 2
RENAULT RLD-2
VOLVO VDS-3
CATERPILLAR ECF-2/ECF-1-a

CUMMINS CES 20076/20077
CUMMINS CES 20078
DETROIT DIESEL 93K215

Specifications:

SAE 5W-30
API CK-4
ACEA E8
ACEA E11

DAIMLER DTFR 15C110 Approval
MAN M 3677
VOLVO VDS 4.5
MACK EOS-4.5
RENAULT RLD-3
SCANIA LDF-4
IVECO (ACEA E6-2016)

DAF (ACEA E6-2016)
CATERPILLAR ECF-3
CUMMINS CES 20086
DETROIT DIESEL DDC93K222

7118 TS-18 SHPD

Synthetic Truck Engine Oil



Volume: / Art. Nr.:

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

All-weather synthetic engine oil for heavy-duty and high-speed diesel engines of the latest generation with and without turbocharger, operating in severe conditions on low sulphur fuel. Designed specifically to protect machinery and benefit most out of it regardless of operating conditions.

7120 TS-20 SHPD

Synthetic Truck Engine Oil



Volume: / Art. Nr.:

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

All-weather synthetic engine oil for heavy-duty and high-speed diesel engines with and without turbocharger, operating in difficult conditions. The oil has successfully passed road and laboratory tests at VOLVO, MACK and RENAULT centres and has their written approvals.

7121 TS-21 SHPD

Synthetic Truck Engine Oil



APPROVAL

VOLVO
VDS-4.5

APPROVAL

RENAULT
VI RLD-3

APPROVAL

MACK
EOS-4.5

Volume: / Art. Nr.:

5L	MN7121-5	10L	MN7121-10
20L	MN7121-20	60L	MN7121-60
208L	MN7121-DR	1000L	MN7121-IBC

All-weather ester-containing synthetic engine oil for heavy-duty and high-speed diesel engines of the latest generation with and without turbocharger, operating in severe conditions on low sulphur fuel. The oil has successfully passed road and laboratory tests at VOLVO, MACK and RENAULT centres and has their written approvals.

Specifications:

SAE 15W-40
API CK-4
ACEA 8
ACEA E11

MB 228.31/228.51
VOLVO VDS-4.5
MAN M 3775
MACK EOS-4.5
RENAULT RLD-3
IVECO (ACEA E6-2016)
DAF (ACEA E6-2016)

CATERPILLAR ECF-3
CUMMINS CES 20086
DETROIT DIESEL DDC93K222

Specifications:

SAE 10W-30
API CJ-4/CK-4
ACEA E8
ACEA E11
JASO DH-2

MB 228.31/228.51/235.28
MAN M 3677/M 3477
RENAULT Truck RLD-3
SCANIA Low Ash
VOLVO VDS-4
MACK EO-O Premium Plus
MACK EO-O Premium Plus -07

MTU Type 3.1
CATERPILLAR ECF-2/ECF-3
CUMMINS CES 20081
DETROIT DIESEL DDC 93K218
VOITH Retarder Class B

Specifications:

SAE 10W-30
API CK-4/SN
API CJ-4/CI-4 Plus
ACEA E8
ACEA E11
JASO DH-2

MACK EOS-4.5 Approval
VOLVO VDS-4.5 Approval
RENAULT VI RLD-3 Approval
RENAULT Truck RLD-4
MAN M 3775/M 3575
MB 228.31
MTU Type 2.1

CATERPILLAR ECF-3
DETROIT DIESEL DDC93K222
DETROIT DIESEL DDC93K223
CUMMINS CES 20086/20087
FORD WSS-M2C171-F1
ALLISON TES-439



7123 TS-23 UHPD
Synthetic Truck Engine Oil

Volume: / Art. Nr.:			
	20L	MN7123-20	
208L	MN7123-DR	1000L	MN7123-IBC

Innovative energy-saving synthetic (contains PAO) low-viscosity engine oil developed for the latest generation of turbocharged diesel engines operating under severe conditions, using ultra-low sulphur fuel (15 ppm or less) and equipped with exhaust gas aftertreatment systems: SCR, EGR and DPF. Provides engine protection in accordance with EPA 2010 and GHG 17. Developed to meet the requirements of Volvo and Daimler.

- Specifications:
- SAE 5W-30
 - API CK-4
 - ACEA E4-22/E7-22
 - ACEA E8-22/E11-22
 - JASO DH-2/DH-1/DL-0
- DAIMLER 15C120 (MB228.52)
MB 228.51/228.31
MAN M 3777/M 3677
MAN M 3775/M 3477/M 3271-1
SCANIA LDF-4
MTU Category 3.1/2.1
VOLVO VDS-4.5/VDS-5
- MACK EOS-4.5
RENAULT RLD-4
CATERPILLAR ECF-3
CUMMINS CES 20086/20081
DETROIT DIESEL DFS 93K222
DETROIT DIESEL DFS 93K218
DAF Extender Drain



7124 TS-24 UHPD
Synthetic Truck Engine Oil

Volume: / Art. Nr.:			
	20L	MN7124-20	
208L	MN7124-DR	1000L	MN7124-IBC

Innovative energy-saving synthetic (contains PAO) ultra-low viscosity engine oil developed for the latest generation of turbocharged diesel engines operating under severe conditions, running on low and ultra-low sulphur fuels, and equipped with exhaust gas aftertreatment systems: SCR, EGR and DPF, as well as diesel oxidation catalysts (DOC). Developed to meet the requirements of Scania and MAN.

- Specifications:
- SAE 5W-20
- SCANIA LDF-5
MAN M 3977



7125 TS-25
Synthetic Truck Engine Oil

Volume: / Art. Nr.:			
	20L	MN7125-20	
208L	MN7125-DR	1000L	MN7125-IBC

Innovative energy-saving synthetic (contains PAO) low-viscosity engine oil developed for the latest generation of turbocharged diesel engines operating under severe conditions, using ultra-low sulphur fuel (15 ppm or less) and equipped with exhaust gas aftertreatment systems: SCR, EGR and DPF. Provides engine protection in accordance with EPA 2010 and GHG 17. Developed to meet the requirements of Volvo and Daimler.

- Specifications:
- SAE 5W-30
 - API FA-4
- CUMMINS CES 20087
DETROIT DIESEL DFS 93K223
DAIMLER DFTR 15C130 (MB-228.61)
VOLVO VDS 5222

A range of oils of the most popular viscosities and specifications for motor vehicles (motorcycles, mopeds, scooters and off-road vehicles), outboard motors and garden equipment and petrol tools. Includes oils for two- and four-stroke, air- and liquid-cooled engines.



7202 4-TAKT PLUS

Semi-synthetic 4-Stroke Engine Oil



Volume: / Art. Nr.:

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

A high-quality ester-containing synthetic-based engine oil for modern 4-stroke engines of two-wheeled vehicles with and without an integrated gearbox and with an oil bath clutch, with air and liquid cooling. It may be used in engines with a dry type clutch. It was designed for a guaranteed protection of the engine and the durability of the gearbox.

Specifications:

SAE 10W-40
API SL
JASO MA/MA2

7812 4-TAKT MOTORBIKE

Synthetic 4-Stroke Engine Oil



Volume: / Art. Nr.:

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

An innovative ester-containing synthetic engine oil for 4-stroke high-load engines of motorcycles, pit bikes, motards, etc. for off-road (enduro, motocross, trials, etc.) and highway (stuntriding, supermoto, etc.) driving under extreme loads. It was designed for a guaranteed protection of the engine and the durability of the gearbox.

Specifications:

SAE 10W-40
API SN
JASO MA/MA2

HONDA
HUSABERG
KAWASAKI
SUZUKI
YAMAHA

7813 4-TAKT MOTORBIKE

Synthetic 4-Stroke Engine Oil



Volume: / Art. Nr.:

1L	MN7813-1	4L	MN7813-4
20L	MN7813-20	60L	MN7813-60
208L	MN7813-DR	1000L	MN7813-IBC

An innovative synthetic ester-containing engine oil for 4-stroke high-load engines of motorcycles, pit bikes, motards, etc. for off-road (enduro, motocross, trials, etc.) and highway (stuntriding, supermoto, etc.) driving under extreme loads. It was designed for a guaranteed protection of the engine and the durability of the gearbox.

Specifications:

SAE 10W-30
API SN
JASO MA/MA2

HONDA
HUSABERG
KAWASAKI
SUZUKI
YAMAHA

7814 4-TAKT MOTORBIKE

Synthetic 4-Stroke Engine Oil



Volume: / Art. Nr.:

1L	MN7814-1	4L	MN7814-4
10L	MN7814-10	20L	MN7814-20
60L	MN7814-60	208L	MN7814-DR

An innovative synthetic ester-containing engine oil for 4-stroke high-load engines of motorcycles, pit bikes, motards, etc. for off-road (enduro, motocross, trials, etc.) and highway (stuntriding, supermoto, etc.) driving under extreme loads. It was designed for a guaranteed protection of the engine and the durability of the gearbox.

Specifications:

SAE 10W-50
API SN
JASO MA/MA2

HONDA
HUSABERG
KAWASAKI
SUZUKI
YAMAHA

7832 4-TAKT POWERBIKE

Synthetic 4-Stroke Engine Oil



Volume: / Art. Nr.:

1L	MN7832-1	4L Met.	MN7832-4ME
10L	MN7832-10	20L	MN7832-20
208L	MN7832-DR	1000L	MN7832-IBC

An innovative synthetic ester-containing engine oil for 4-stroke high-load engines of motorcycles, pit bikes, motards, etc. for off-road (enduro, motocross, trials, etc.) and highway (stuntriding, supermoto, etc.) driving under extreme loads. It was designed for a guaranteed protection of the engine and the durability of the gearbox.

Specifications:

SAE 15W-50
API SN
JASO MA/MA2

DUCATI
KAWASAKI
YAMAHA
SUZUKI
HONDA

7860 4-TAKT POWER PLUS

Semi-Synthetic 4-Stroke Engine Oil



Volume: / Art. Nr.:

1L MN7860-1

Innovative semi-synthetic ester-containing engine oil for 4-stroke high-loaded engines of motorbikes and pitbikes, motards etc. for off-road (enduro, motocross, trials etc.) and road (stunt riding, supermoto etc.) riding with extreme loads. Designed for reliable engine protection and gearbox durability.

Specifications:

SAE 15W-50
API SN
JASO MA/MA2

DUCATI
HONDA
KAWASAKI
SUZUKI
YAMAHA

7209 4-TAKT PREMIUM

Universal 4-Stroke Engine Oil



Volume: / Art. Nr.:

1L MN7209-1

20L MN7209-20 208L MN7209-DR

A high-quality ester-containing synthetic-based engine oil for modern 4-stroke engines of two-wheeled vehicles with and without an integrated gearbox and with an oil bath clutch, with air and liquid cooling. It may be used in engines with a dry type clutch. It was designed for a guaranteed protection of the engine and the durability of the gearbox.

Specifications:

SAE 20W-40
API SN
JASO MA2

7830 4-TAKT HD MOTORBIKE

Universal 4-Stroke Engine Oil



Volume: / Art. Nr.:

1L MN7830-5 10L MN7830-10

20L MN7830-20 60L MN7830-60

208L MN7830-DR 1000L MN7830-IBC

A universal all-season ester-containing synthetic-based engine oil for 4-stroke normal- and high-load engines (including 2-cylinder V-type) for highway, off-road and racing motorcycles. It was designed for a guaranteed protection of the engine and the durability of the gearbox.

Specifications:

SAE 20W-50
API SN
JASO MA/MA2

7820 4-TAKT AQUA JET

Semi-synthetic 4-Stroke Engine Oil



Volume: / Art. Nr.:	
1L	MN7820-1

A high-quality ester-containing synthetic-based engine oil for modern 4-stroke engines of sport and tourist jet skis with and without a turbocharger, it is recommended for use under increased loads and high ambient temperatures.

Specifications:
SAE 10W-40
JASO MA2
NMMA FC-W

API SL
BRP ROTAX
HONDA
KAWASAKI
POLARIS
SEA DOO
SUZUKI
YAMAHA

7207 OUTBOARD MARINE

Universal 2-Stroke Engine Oil



Volume: / Art. Nr.:			
1L	MN7207-1	4L	MN7207-4
20L	MN7207-20	60L	MN7207-60
208L	MN7207-DR	1000L	MN7207-IBC

A high-quality synthetic-based engine oil for modern 2-stroke outboard engines with water cooling. It is designed for 2-stroke outboard engines, water scooters and jet skis, as well as for all 2-stroke engines with the required oil level of API TC or NMMA TC W3®.

Specifications:
API TC
JASO FC
NMMA TC-W3

7208 OUTBOARD UNIVERSAL

Universal 2-Stroke Engine Oil



Volume: / Art. Nr.:			
1L	MN7208-1	4L	MN7208-4
10L	MN7208-10	20L	MN7208-20
60L	MN7208-60	208L	MN7208-DR

A high-quality mineral engine oil for modern 2-stroke petrol-powered outboard engines with water cooling that use petrol-oil mix. It is produced from a highly-purified basic oil and a special ashless additive package.

Specifications:
API TC
NMMA TC-W2

7204 2-TAKT PLUS

Semi-synthetic 2-Stroke Engine Oil



Volume: / Art. Nr.:

100ml Met.	MN7204-1ME	1L	MN7204-1
4L	MN7204-4	10L	MN7204-10
20L	MN7204-20	60L	MN7204-60
208L	MN7204-DR	1000L	MN7204-IBC

A universal high-quality ester-containing synthetic-based engine oil for modern high-load and high-speed 2-stroke engines with air and liquid cooling. It is suitable for the lubrication by a pre-mixed blend and an automatic mixing in an engine intake.

Specifications:

API TC
JASO FD
ISO L-EGD
TISI

HUSQVARNA 242
Chainsaw

7205 2-TAKT UNIVERSAL

Universal 2-Stroke Engine Oil



Volume: / Art. Nr.:

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

A universal ester-containing high-quality mineral-based engine oil for modern high-load and high-speed 2-stroke engines with air cooling. It is suitable for the lubrication by a pre-mixed blend and an automatic mixing in an engine intake.

Specifications:

API TC
JASO FB
ISO L-EGD

7201 2-TAKT SNOWPOWER

Synthetic 2-Stroke Engine Oil



Volume: / Art. Nr.:

		1L	MN7201-1
4L	MN7201-4	20L	MN7201-20
60L	MN7201-60	208L	MN7201-DR

A unique ester-containing synthetic engine oil for 2-stroke engines with air and liquid cooling operating at low temperatures with various fuel and oil mixing (input) systems (with both a separate oil input and lubrication by a fuel-oil mixture). It was developed in compliance with heightened requirements for last-generation engines.

Specifications:

API TC+
JASO FD
ISO L-EGD

BRP ROTAX 253
Snowmobile
BOMBARDIER
SKI-DOO
LYNX
ARCTIC CAT
POLARIS
YAMAHA

7203 4-TAKT AGRO

Universal 4-Stroke Engine Oil



Volume: / Art. Nr.:

1L	MN7203-1	4L	MN7203-4
20L	MN7203-20	60L	MN7203-60
208L	MN7203-DR	1000L	MN7203-IBC

A high-quality mineral engine oil for modern small 4-stroke engines of gardening equipment. It is designed for gardening equipment equipped with petrol-powered 4-stroke engines with air and liquid cooling: electric lawn-mowers, power cultivators, mini tractors, generators, powered pumps, etc.

7206 AGRO

Universal 2-Stroke Engine Oil



Volume: / Art. Nr.:

1L	MN7206-1	20L	MN7206-20
60L	MN7206-60	208L	MN7206-DR

A special high-quality mineral engine oil for 2-stroke HUSQVARNA engines. It is suitable for the lubrication by a pre-mixed blend and a mixing in an engine intake.

7858 AGRO FORMULA S

2-Stroke Chainsaw Engine Oil



Volume: / Art. Nr.:

120ml _{Pet.} MN7858-012			
1L _{Os}	MN7858-1	1L _{Pet.}	MN7858-1
20L	MN7858-20	60L	MN7858-60
208L	MN7858-DR	1000L	MN7858-IBC

A special high-quality synthetic-based ester-containing engine oil for modern 2-stroke engines operating at high speeds and under intensive use.

Specifications:

SAE 30
API SL
JASO MA/MA2

Specifications:

API TC
JASO FB

Specifications:

API TC
JASO FB
ISO L-EGB
Others 2-stroke engines

7859 AGRO FORMULA H

2-Stroke Chainsaw Engine Oil



Volume: / Art. Nr.:

		120ml Pet. MN7859-012	
1L Ds	MN7859-1	1L Pet.	MN7859-1
20L	MN7859-20	60L	MN7859-60
208L	MN7859-DR	1000L	MN7859-IBC

A special high-quality synthetic-based ester-containing engine oil for 2-stroke HUSQVARNA engines. It is suitable for the lubrication by a pre-mixed blend and an automatic mixing in an engine intake.

Specifications:

API TC
JASO FB
HUSQVARNA
2-stroke engines

1101 KETTENOEL

Chainsaw Chain Oil



Volume: / Art. Nr.:

		1L MN1101-1	
4L	MN1101-4	10L	MN1101-10
20L	MN1101-20	60L	MN1101-60
208L	MN1101-DR	1000L	MN1101-IBC

A highly-purified mineral-based oil for the lubrication of cutting edges of petrol and electric saws with a manual and automatic oil supply. 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.

Specifications:

ISO Viscosity Grade 100

A range of oils for all types of automatic transmissions: classic cars, CVTs and dual-clutch robots. It includes universal oils, oils of the most popular OEM specifications and oils for automatic transmissions of the latest generations.



8221 ATF SPECIAL FLUID

Automatic Transmission Fluid.
Synthetic



Volume: / Art. Nr.:

1L Met.	MN8221-1ME	20L	MN8221-20
208L	MN8221-DR	1000L	MN78221-IBC

Low-viscosity synthetic transmission oil (ATF) specially developed for 9-speed automatic transmissions (AT) of the latest generation 9G-TRONIC W9A 700 series, also designated NAG3 models 725.XXX XXXXXX, MERCEDES BENZ cars. Ensures smooth operation of the automatic transmission, guarantees minimal wear, long service life of transmissions and fuel economy. Developed based on the requirements of DAIMLER AG.

Specifications:

MB 236.17
MB 236.16

Specially designed
for 9G-Tronic NAG3
SSANGYONG

8215 ATF

Automatic Transmission Fluid.
Synthetic



Volume: / Art. Nr.:

		1L	MN8215-1
20L	MN8215-20	60L	MN8215-60
208L	MN8215-DR	1000L	MN8215-IBC

A special low-viscosity synthetic transmission fluid (ATF) for automatic gearboxes of vehicles. It ensures a flawless operation of an automatic gearbox, guarantees minimal wear, a lasting service life of transmissions and fuel economy.

Specifications:

MB 236.15

MB 722.9
MB NAG2FE+
MB 0019897903
MB 001989780310
MB 001989780311
SSANGYONG



8208 ATF T-IV

Automatic Transmission Fluid.
Synthetic

Volume: / Art. Nr.:

1L	MN8208-1	4L	MN8208-4
20L	MN8208-20	60L	MN8208-60
208L	MN8208-DR	1000L	MN8208-IBC

A special synthetic transmission fluid (ATF) for automatic gearboxes of TOYOTA/LEXUS vehicles with new-generation TOYOTA and AISIN AW gearboxes. It ensures a flawless operation of an automatic gearbox, guarantees minimal wear, a lasting service life of transmissions and fuel economy. It was developed on the basis of the requirements set by the company AISIN WARNER.

8209 ATF SP-III

Automatic Transmission Fluid.
Synthetic



Volume: / Art. Nr.:

		1L	MN8209-1
1L Met.	MN8209-1ME	4L	MN8209-4
20L	MN8209-20	60L	MN8209-60
208L	MN8209-DR	1000L	MN8209-IBC

A special synthetic transmission fluid (ATF) for automatic gearboxes of MITSUBISHI, HYUNDAI, KIA vehicles. It ensures a flawless operation of an automatic gearbox, guarantees minimal wear, a lasting service life of transmissions and fuel economy. It is designed on the basis of the requirements set by Korean car manufacturers.

8211 ATF AG-52

Automatic Transmission Fluid.
Synthetic



Volume: / Art. Nr.:

1L	MN8211-1	4L	MN8211-4
10L	MN8211-10	20L	MN8211-20
60L	MN8211-60	208L	MN8211-DR

A special all-season synthetic transmission fluid (ATF) for modern 4-5-speed automatic transmission gearboxes of the ZF Group. It is not suitable for 6-speed automatic transmissions. It ensures a flawless operation of an automatic gearbox, guarantees minimal wear, a lasting service life of transmissions and fuel economy even under maximum loads. It was developed taking into account special requirements of the group VW G 052 162.

Specifications:

JASO M315, Type 1A

TOYOTA ATF JWS 3309
TOYOTA ATF Type T/T-II/T-III
TOYOTA ATF Type T-IV, 08886-81015
TOYOTA ATF Type D-II

Specifications:

JASO M315, Type 1A

HYUNDAI ATF RED -1K
HYUNDAI JWS 3314
HYUNDAI 00232-19023
HYUNDAI 04500-00140
HYUNDAI UM040 CH20 Red-1
HYUNDAI SP/SP-II/SP-III

KIA ATF RED-1K
KIA JWS 3314
KIA 00232-19023
KIA 04500-00140
KIA UM040 CH20 Red-1
KIA SP/SP-II/SP-III

MITSUBISHI ATF-J2
MITSUBISHI Dia Queen AW
MITSUBISHI DII/DIII
MITSUBISHI SP, MS991156
MITSUBISHI SP-II/SP-III

Specifications:

JASO M315, Type 1A

VW/AUDI G US 000 162
VW/AUDI LT 71141/G 052 162 [AG4]
VW/AUDI G 052 990-A2/G 055 025-A2
MB 236.1/2/5/6/7/8/9/10/11
MB A 0019892203/ATF 3403-M115
BMW ATF4/LA 2634/LT 71141
BMW ETL-7045/7045 E/8072B

BMW P/N 81 22 9 400 272/275
BMW P/N 81 22 9 407 858/859
BMW P/N 83 22 9 407 765/807
BMW P/N 83 22 0 024 249/359
BMW P/N 83 22 0 026 922
BMW P/N 83 22 0 403 248/249

BMW P/N 83 22 7 542 290
BMW P/N 83 22 2 220 438/440/442
BMW/MINI P/N 83 22 0 402 413
MINI ATF JWS 3309
RENAULT DP-0/Matic D2/SATF-D

For complete list of specifications
please visit www.mannol.de

8212 ATF AG-55
Automatic Transmission Fluid.
Synthetic



Volume: / Art. Nr.:			
1L	MN8212-1	4L	MN8212-4
4L Met.	MN8212-4ME	10L	MN8212-10
20L	MN8212-20	60L	MN8212-60
208L	MN8212-DR	1000L	MN8212-IBC

A special all-season synthetic transmission fluid (ATF) for new-generation 6-speed automatic gearboxes of the ZF Group. It ensures a flawless operation of an automatic gearbox, guarantees minimal wear, a lasting service life of transmissions and fuel economy even under extreme loads. It was developed taking into account special requirements G 055 005 set by the VW Group.

8213 ATF AG-60
Automatic Transmission Fluid.
Synthetic



Volume: / Art. Nr.:			
		1L	MN8213-1
4L	MN8213-4	10L	MN8213-10
20L	MN8213-20	60L	MN8213-60
208L	MN8213-DR	1000L	MN8213-IBC

A special all-season synthetic transmission fluid (ATF) for modern 8-speed automatic gearboxes of all types and 6-speed automatic gearboxes of the ZF Group. It ensures a flawless operation of an automatic gearbox, guarantees minimal wear, a lasting service life of transmissions and fuel economy. It was developed taking into account special requirements set by the VW Group.

8216 ATF CVT
Continuously Variable Transmission Fluid.
Synthetic



Volume: / Art. Nr.:			
		1L	MN8216-1
4L	MN8216-4	10L	MN8216-10
20L	MN8216-20	60L	MN8216-60
208L	MN8216-DR	1000L	MN8216-IBC

A special synthetic gear oil for CVT (Continuously Variable Transmission) – variable-speed gears. It was specially developed for use in continuously variable transmissions with a rigid articulated chain or a steel pull chain. It ensures a flawless operation of an automatic gearbox, guarantees minimal wear, a lasting service life of a transmission and fuel economy.

Specifications:

JASO Type 1A

AUDI/VW G 052 025-A2/G 052 990-A2/
G 052 055/G 052 162-A1/-A2/
G G 055 025-A2/G 055 005
MB 236.5/ 236.10/236.11
GM Dexron II-E/-II/-II-D/III-G/III-H/
T-IV/19 40 700/21005966 Transaxle/
22717466/88900925/Type A Suffix A/
9986195/19 40 767

BMW/MINI 81 22 9 400 272/
83 22 9 407 765/81 22 9 407 858/
83 22 0 024 249/83 22 0 026 922/
83 22 0 402 413/83 22 0 403 248/
83 22 7 542 290/83 22 9 407 807/
81 22 9 400 275/81 22 9 407 859/
83 22 0 024 359/83 22 0 403 249

ZF TE-ML 11A/TE-ML 11B
FORD XT-2-QDX (M)/XT-2-QSM [Syn]

For complete list of specifications
please visit www.mannol.de

Specifications:

JASO M315, Type 1-A-LV

ACURA ATF Type 3.1
ALLISON C4
VW/AUDI G 060 162
BMW 83 22 2 152 426
BMW 83 22 2 305 397
BMW ATF +3
FIAT 9.55550-AV5

GM T-IV/ATF Type A Suffix A
HONDA ATF Type 3.1
LAND ROVER LR023288
LAND ROVER LR023289
MAN 339 A
ZF S671 090 310/S671 090 311
ZF S671 090 312/TE-ML 11

Additional Recommended Applications
ATF L 12108/ZF Lifeguard fluid 8/
Shell ATF 3353

Specifications:

VW G 052 180
BMW/MINI 83 22 0 429 154
BMW/MINI CVT EZL 799A
CHRYSLER CVT FLUID NS-2
DAIHATSU AMIX CVT FLUID DC
FORD WSS M2C928-A/M2C933-A
FORD CVT FLUID 23/30/Mercon C

HONDA HMMF (08260-99904)/HCF-2
HYUNDAI/KIA ATF SP-III
JEEP CVT FLUID NS-2
GM DEX-CVT
MB 236.20
MAZDA CVT FLUID JWS 3320
NISSAN/INFINITI CVT FLUID NS-1

NISSAN/INFINITI NS-2 (KLE52-00004)
TOYOTA/LEXUS CVT FLUID TC/FE
SUZUKI SCVT FLUID/CVT OIL
SUZUKI CVT FLUID GREEN 1/2

For complete list of specifications
please visit www.mannol.de



8217 ATF WS

Automatic Transmission Fluid.
Synthetic

Volume: / Art. Nr.:

		1L	MN8217-1
4L	MN8217-4	20L	MN8217-20
60L	MN8217-60	208L	MN8217-DR

A special low-viscosity synthetic transmission fluid (ATF) for automatic gearboxes of TOYOTA/LEXUS vehicles with latest-generation TOYOTA and AISIN AW gearboxes, including sequential. It ensures a flawless operation of an automatic gearbox, guarantees minimal wear of ball bearings, stuffing boxes and gears, a lasting service life of the whole transmission and fuel economy. It was developed on the basis of the requirements set by the company AISIN WARNER.

8218 ATF MULTIVEHICLE

Automatic Transmission Fluid.
Universal



Volume: / Art. Nr.:

		1L	MN8218-1
4L	MN8218-4ME	10L	MN8218-10
20L	MN8218-20	60L	MN8218-60
208L	MN8218-DR	1000L	MN8218-IBC

Universal all-season high-viscosity synthetic transmission fluid (ATF) for automatic gearboxes. It was specially developed for all modern automatic gearboxes equipped with and without a hydraulic converter lock-up. It is recommended for automatic gearboxes produces by American, Asian and European manufacturers.

8219 ATF SP-IV

Automatic Transmission Fluid.
Synthetic



Volume: / Art. Nr.:

		1L	MN8219-1
1L Met.	MN8219-1ME	4L	MN8219-4
20L	MN8219-20	60L	MN8219-60
208L	MN8219-DR	1000L	MN8219-IBC

Special low viscosity synthetic gear oil (ATF) with a special additive package for HYUNDAI 6-speed automatic transmissions. Designed based on the requirements of Korean car manufacturers.

Specifications:

JAMA JASO M315, Class 1-A-LV L A

AISIN WARNER JWS 3324
AISIN WARNER NWS-9638
AISIN WARNER NWS-9638 T5
FCA ATF+/ATF+2/ATF+3/ATF+4
FCA ACRC/AB/Type 9602
FCA 8 & 9 Speed ATF, 68218925AA
FCA 236.10/236.12, 05127382AA

FCA 68333587AA/SP-III/Type 7176E
TOYOTA/LEXUS ATF WS Lifetime/
08886-02303/08886-02305/
08886-80803/08886-80807/08886-81210
CHRYSLER ATF+3/ATF+4/AS68RC
GM 88863400/88863401
LAND ROVER LR0022460

MAN 339 Type Z1
VOITH ATs 55.6335
VW G055 540 (A2)
For complete list of specifications
please visit www.mannol.de

Specifications:

JASO M315, Type 1A

AISIN WARNER JWS 3309
JATCO ATF 3100 PL085
FORD Mercon V/SP/LV/ATF Type F
FORD XT-8-QMM5 [FRN5]
GM Dexron II/II D/II E/III F/III G/III H
MB 236.1/2/3/5/6/7/9/10/11
MAN 339 F/V1/V2/Z1/Z2

VW G 052 025-A2/G 052 162-A1/
G 052 990-A1/-A2/G 055 025-A1/
G 055 025-A2
HONDA ATF-Z1 (not for CVT)/ATF DW-1
HYUNDAI/KIA SP-II/SP-III
NISSAN/INFINITI MATIC D/-J/-K
NISSAN/TEXACO N402 (JATCO FWD)

MITSUBISHI DIAMOND SP-II/SP-III
MAZDA ATF-M III/ATF-MV
TOYOTA ATF Type T/T-II/T-III/T-IV

For complete list of specifications
please visit www.mannol.de

Specifications:

JASO M315, Class 1-A-LV

HONDA/ACURA DW-1
HONDA ATF Type 3.0/ATF Type 3.1
NISSAN/INFINITI Matic S/Matic W
BMW/MINI 83 22 0 142 516 (1375.4)/
83 22 0 397 114/83 22 2 152 426/
83 22 2 289 720/83 22 2 163 514/
83 22 2 305 397

FORD XT-10-QLVC/XT-6-QSP/XT-6-DSP
HYUNDAI/KIA NWS-9638 T-5/SP-IV/
HYUNDAI/KIA SPH-IV/SP-IV-RR
HONDA ATF Type 3.0/ 3.1/DW-1
NISSAN/INFINITI Matic S/W
MAZDA FZ/FW 6A EL/FW 6AX EL
MB 236.12/236.14/236.15/236.41

MITSUBISHI ATF-J3/Dia Queen ATF-PA
TOYOTA Scion FZ/Type WS/JWS 3324

For complete list of specifications
please visit www.mannol.de

8220 CVT NS-3
Variable Transmission Fluid.
Synthetic



Volume: / Art. Nr.:			
	1L	MN8220-1	
1L Met.	MN8220-1ME	4L	MN8220-4
20L	MN8220-20	208L	MN8220-DR

Special synthetic transmission oil for continuously variable transmissions with CVTF V-belt variator (Continuously Variable Transmission Fluid). Ensures smooth operation of automatic transmissions, guarantees minimum wear, long transmission life and fuel economy in all operating conditions and modes.

Specifications:
BMW/MINI 83 22 0 136 376/ZF CVT V1
83 22 0 429 154/EZL 799A/EZL 799/
Punch EZL 799A/Punch EZL799
VW G 052 180/G 052 516
MB 236.20/CVT28
CHRYSLER CVTF+4
HONDA HMMF (Without starting clutch)
HONDA HMMF HCF-2/CVTF

FORD MOTORCRAFT XT-7-QCFT
FORD WSS-M2C933-A/MERCON C
FORD CVT23/CFT30
MITSUBISHI DiaQueen CVTF-J1/-J4
NISSAN Matic W/NS-1/NS-2/NS-3
MAZDA CVTF 3320
RENAULT ELFMATIC

SUBARU LINEARTRONIC CVTF II/CVTF
SUBARU E-CVTF/I-CVTF/CV-30
TOYOTA CVT Fluid TC/FE

For complete list of specifications
please visit www.mannol.de

8222 ATF ULV
Automatic Transmission Fluid.
Fully-synthetic



Volume: / Art. Nr.:			
	1L	MN8222-1	

Special ultra-low viscosity synthetic gear oil with a special additive package for the latest AISIN 8-speed gearboxes including those equipped with a slip lock-up clutch.

Specifications:
JASO M315, Class 1-A-LV (1)

ATF 134/3353/D971/L12108
ATF M-1375.4/M-1375.6
BENTLEY PY112995PA
AUDI G 052 533/G 053 001 A2
AUDI G 055 005 A2/G 055 162 A2, A6
AUDI G 055 540 A2/G 060 162 A2
AUDI G 060 540 A2

BMW ATF 3+/ATF 7/ATF 6
BMW M-L12108/83 22 0 142 516
BMW 83 22 0 397 114/83 22 2 152 426
BMW 83 22 2 163 514/83 22 2 289 720
BMW 83 22 2 305 396/83 22 2 305 397
BMW 83 22 2 355 599/83 22 2 355 601
BMW 83 22 2 413 477

HYUNDAI/KIA ATF SP-IV/040000C90SG
HYUNDAI/KIA SP4-M1/SPH-IV/SP-IV
HYUNDAI/KIA SP-IV-RR

For complete list of specifications
please visit www.mannol.de

8205 DEXRON II
Automatic Transmission Fluid.
Universal



Volume: / Art. Nr.:			
	1L	MN8205-1	
4L	MN8205-4	10L	MN8205-10
20L	MN8205-20	60L	MN8205-60
208L	MN8205-DR	1000L	MN8205-IBC

A universal all-season mineral-based transmission fluid (ATF) for automatic gearboxes, hydraulic power steering systems, cab tilt mechanisms, car hydraulic clutches and other hydraulic devices, including the ones operating under heavy-duty conditions in trucks and off-road vehicles. It ensures a flawless operation of an automatic gearbox, guarantees minimal wear, a lasting service life of transmissions and fuel economy. It was developed on the basis of the requirements set by the GM group.

Specifications:
ALLISON C4
CATERPILLAR TO-2
GM Dexron II D
MAN 339 V1/339 Z1
MB 236.5/236.7
RENK

VOITH H 55.6335.xx (G607)
ZF TE-ML 03D/TE-ML 04D
ZF TE-ML 11A/TE-ML 14A
ZF TE-ML 17C



8206 DEXRON III

Automatic Transmission Fluid.
Synthetic

Volume: / Art. Nr.:

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

A universal all-season synthetic-based transmission fluid (ATF) for automatic gearboxes, hydraulic converters, hydraulic power steering systems, car hydraulic clutches and hydraulic devices, including the ones operating under heavy-duty conditions in trucks and off-road vehicles. It is designed for the majority of automatic gearboxes for GM, FORD Company and other brands manufactured up to 2006.



8207 DEXRON VI

Automatic Transmission Fluid.
Synthetic

Volume: / Art. Nr.:

		1L	MN8207-1
4L	MN8207-4	10L	MN8207-10
20L	MN8207-20	60L	MN8207-60
208L	MN8207-DR	1000L	MN8207-IBC

A universal all-season synthetic transmission fluid (ATF) for automatic gearboxes, hydraulic converters, hydraulic power steering systems, car hydraulic clutches and other hydraulic devices, including the ones operating in heavy-duty conditions in trucks and off-road vehicles. It ensures a flawless operation of an automatic gearbox, guarantees minimal wear, a lasting service life of transmissions and fuel economy. It was developed on the basis of the requirements set by GM and FORD groups.

Specifications:

ALLISON C4
CATERPILLAR TO-2
FORD Mercon V
FORD ESP-M2C138-CJ
FORD ESP-M2C166-H
GM Dexron III H/G/F
MB 236.1

VOITH H 55.6335.xx (G607)
ZF TE-ML 09/TE-ML 11
ZF TE-ML 14

Specifications:

JASO M315, Class 1-A-LV

AINIS WARNER JWS 3309/
JWS 3324/ATF-0T4/ATF-0WS
ALLISON C4/C3/C2/389
BENTLEY PY112995PA
BOSCH TE-ML 09
CITROEN Z 000169756
FORD Mercon LV

FORD ESP-M2C138-CJ/
ESP-M2C166-H/XT-10-QLV [LV]/
XT-2-QDX M/XT-2-QSM [Syn]/
XT-5-QM [V]/XT-5-QSM [V Syn]/
XT-6-QSP [SP]/XT-8-QAW [Premium]/
XT-9- QMM5 [FRN5]/WSS-M2C922-A1
GM Dex-VI [GMW 16444]

GM Dex [GM 6032M]/Dex-B [GM 6032M]
GM Dex-IIC [6137M]/Dex-IID [GM 6137M]

For complete list of specifications
please visit www.mannol.de

A range consisting of oils for manual transmissions with and without synchronizers and oils for main gears, including gears with high-friction LS differentials, transfer cases and on-board gearboxes and other gear mechanisms of cars and trucks, buses, construction, road and agricultural machinery.



8115 MTF-3

Special Transmission Fluid.
Fully Synthetic



Volume: / Art. Nr.:

		1L	MN8115-1
20L	MN8115-20	60L	MN8115-60
208L	MN8115-DR	1000L	MN8115-IBC

Universal energy-saving all-season transmission fully synthetic oil of the latest generation specially developed for use in robotic and manual gearboxes of TOYOTA and FORD cars (Attention! Not for all manual transmissions). Applicable for transfer cases and differentials. Developed based on the requirements of the TOYOTA group.

Specifications:

SAE 75W
API GL-4

TOYOTA LV/08885-81081
NISSAN LV MTF-1
FORD WSS-M2C200-D2
BMW MTF LT-3/LT-2
BMW 83 220 396 706
BMW 83 22 7 533 818
BMW 2300 7533 818

MB 235.71
VW G 052 727/052 749/052 798
VW TL 521 71 (G 052 171 A1)
VW TL 521 71 (G 052 171 A2)
VW TL 521 78 (G 052 178 A2)
VW TL 525 12 (G 052 512 A2)
VOLVO 1161838/1161839

Others JWS 2271

For complete list of specifications
please visit www.mannol.de

8100 AWD

Gear Transmission Fluid.
Fully Synthetic



Volume: / Art. Nr.:

850ml MN8100-085

The special synthetic transmission oil is developed for Haldex couplings of all generations, as well as for Allroad, Quattro and 4motion couplings and ensures long and smooth operation of these mechanisms. Designed to meet the special requirements of the VW group G 060 175.

Specifications:

VW G 060 175 A2
VW G 055 175 A2
VW G 052 175 A2
BMW 8322 2413513
GM 93165387
LAND ROVER LR 003136
LAND ROVER LR 054941
OPEL/VAUXHALL 1940057
VOLVO 31367940

8103 EXTRA GEAR OIL

Synthetic Gear Oil



Volume: / Art. Nr.:

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

A universal last-generation energy-conserving all-season synthetic gear oil for all types of manual transmissions. It is recommended for use in all types of synchronized manual transmissions (including heavy-duty), in differentials (including LS with excessive friction), steering equipment and other transmission parts where an excessive pressure and impact load is encountered and in which the use of standards GL-4 and/or GL-5 is prescribed.

8104 MTF-4 GEAR OIL

Synthetic Gear Oil



Volume: / Art. Nr.:

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

A latest-generation energy-conserving synthetic gear oil for manual transmissions. It is recommended for use in all types of 5- and 6-speed synchronized manual transmissions, including transmissions with an incorporated differential of front wheel drive vehicles, transfer cases and main gears, in which the application of the standard GL-4 is prescribed. It was developed on the basis of the requirements set by the BMW group.

8108 BASIC PLUS

Fully Synthetic Gear Oil



Volume: / Art. Nr.:

		1L Met.	MN8108-1ME
1L	MN8108-1	4L	MN8108-4
20L	MN8108-20	60L	MN8108-60
208L	MN8108-DR	1000L	MN8108-IBC

An all-season universal last-generation energy-conserving gear oil (containing PAO) designed specially for the lubrication of manual transmissions with an incorporated differential of front drive vehicles. It is suitable for all types of synchronized and non-synchronized manual transmissions (including heavy-loaded). It was developed on the basis of the requirements set by the VW Group.

Specifications:

SAE 75W-90
API GL-4
API GL-5 LS (Limited Slip)

MACK GO-J
 MACK GO-J Plus
 MAN 342 Type M1
 MAN 342 Type M2
 MAN 342 Type M3
 SCANIA STO 1:0

Specifications:

SAE 75W-80
API GL-4

BMW MTF LT-1/MTF LT-2
 BMW MTF LT-3/MTF LT-4
 VW G 009 317/G 052 171
 VW G 052 178/G 052 512
 VW G 052 532/G 052 527
 VW G 052 726/G 052 798
 VW G 055 726

FORD WSS-M2C200-D2
 MB 235.10
 MITSUBISHI MZ312644 3005401
 NISSAN 999MP-MTF20P KE91699932R
 PEUGEOT 9730A2/9730A8
 PSA B71 2330
 TOYOTA JWS 227

Specifications:

SAE 75W-90
API GL 4+
MIL L 2105

VW 501 50

8102 MAXPOWER 4x4

Fully Synthetic Gear Oil



Volume: / Art. Nr.:

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

All-season last-generation gear oil (contains PAO) specially designed for the lubrication of all types of differentials, including excessive friction differentials where the oil "Limited Slip Oil API GL5" is required. It was developed for hypoid, bevel and spiral gears.

8109 UNIGEAR

Synthetic Gear Oil



Volume: / Art. Nr.:

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

A universal energy-conserving synthetic gear oil. It may be used in all manual transmission devices, including 5- and 6-speed synchronized manual transmissions, transmissions with an incorporated differential of front wheel drive vehicles, transfer cases and main gears, including hypoid.

8202 DCT FLUID

Synthetic Gear Oil



Volume: / Art. Nr.:

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

A special synthetic gear oil (containing PAO) for DCT – dual clutch transmission/DSG – Direct Shift Gearbox or “robots”. It is not recommended for gearboxes with a “dry” clutch. It ensures a flawless operation of a gearbox, guarantees minimal wear, a lasting service life and fuel economy.

Specifications:

SAE 75W-140
API GL-5 LS (Limited Slip)
MIL L 2105 D

MAN 342
SCANIA STO 1:0

Specifications:

SAE 75W-80
API GL-4/GL-5 LS
MIL L 2105 C

FORD WSD-M2C200-C
MACK GO-J Plus
PSA B71 2330

Specifications:

VW G 052 182/G 052 529/6-speed
BMW 83 22 2 148 578/83 22 2 148 579
BMW 83 22 0 440 214/83 22 2 147 477
BMW Drivelogic 7-speed (Getrag)
BMW DCTF-1/ DCTF-1+/6-speed DCT
FORD WSS-M2C936-A
NISSAN WSS-M2C936-A

MB 236.21/001 989 85 03
MITSUBISHI MZ320065
MITSUBISHI TC-SST 6-speed (GFT)
PORSCHE 999.917.080.00
RENAULT EDC 6-speed (Getrag)
RENAULT EDC-7/Talisman R7D
PSA 9734.S2

PEUGEOT DCS 6-speed (GFT)
VOLVO 1161838/1161839
FERRARI 7-speed (Getrag)/TF DCT-3
PENTOSIN FFL-8
CASTROL BOT 341/BOT 450
Others SHELL TF DCT-F3
BORGWARNER/BUGATTI VEYRON

8107 UNIVERSAL GEAR OIL

Universal Gear Oil



Volume: / Art. Nr.:

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

A universal all-season mineral-based gear oil. It was developed for all types of synchronized and non-synchronized manual transmissions, drive axles and other components of manual transmissions operating under sustainable and heavy loads.

8101 FWD GEAR OIL

Semi-synthetic Gear Oil



Volume: / Art. Nr.:

		1L	MN8101-1
4L	MN8101-4	20L	MN8101-20
60L	MN8101-60	208L	MN8101-DR

A latest-generation energy-conserving all-season semi-synthetic gear oil for manual transmissions. It is recommended for use in all types of synchronized manual transmissions (including transmissions with an incorporated differential in front wheel drive vehicles) and in heavy-duty non-synchronized manual transmissions, transfer cases and main gears, in which the application of the standard GL-4 and/or MT-1 is prescribed.

8118 ULTRA GEAR OIL

Semi-synthetic Gear Oil



Volume: / Art. Nr.:

1L	MN8118-1	5L	MN8118-5
20L	MN8118-20	60L	MN8118-60
208L	MN8118-DR	1000L	MN8118-IBC

Universal energy-saving all-season semi-synthetic gear oil of the latest generation, meeting the latest international standards. Suitable for all types of main gears with hypoid and bevel gears, transfer cases, wheel reduction gears as well as for manual gearboxes and other transmission units where GL-5 grade oil is required. Meets the requirements of the latest global J2360 standard for gear oils.

Specifications:

SAE 80W-90
API GL-4
MIL L 2105

Specifications:

SAE 75W-85
API GL-4
API MT-1

ISO 12925-1 (CKC)
ISO 6743-6 (CKC)
DIN 51517-3 (CLP)
ANSI AGMA 250.04
MIL L 2105
US STEEL 224

Specifications:

SAE 75W-90
API GL-5

FORD WSD-M2C200-C
MACK GO-J/GO-J Plus
SCANIA STO 1:0
MAN 342 Type M1/342 Type M2
MAN 342 Type M3/342 Type S1
MAN 342 Type S2
ZF TE-ML 5A/TE-ML 7A
ZF TE-ML 8A/TE-ML 16B-D
ZF TE-ML 17B
SAE J2360

8105 HYPOLD LSD

Universal Gear Oil



Volume: / Art. Nr.:			
4L	MN8105-4	10L	MN8105-10
20L	MN8105-20	60L	MN8105-60
208L	MN8105-DR	1000L	MN8105-IBC

A universal all-season high-viscosity mineral-based gear oil for manual transmissions. It was developed for a safe and reliable operation of self-locking differentials (differentials with excessive friction/limited slip – LS), main gears with hypoid pinions and other manual transmission parts with bevel, worm and cylindrical pairs withstanding extreme (including impact) loads and high operating temperatures.

Specifications:
SAE 85W-140
API GL-5 LS (Limited Slip)
MIL L 2105 D

8106 HYPOLD GEAR OIL

Universal Gear Oil



Volume: / Art. Nr.:			
		1L	MN8106-1
4L	MN8106-4	10L	MN8106-10
20L	MN8106-20	60L	MN8106-60
208L	MN8106-DR	1000L	MN8106-IBC

A universal all-season mineral-based gear oil. It was developed for hypoid gears withstanding extreme loads; in heavy-duty bevel, cylindrical and worm pairs. It is recommended for use in differentials (including excessive friction – LS). It may be used for all types of manual transmissions, including the ones withstanding extremely heavy loads and high temperatures.

Specifications:
SAE 80W-90
API GL-4/GL-5 LS
(Limited Slip)
API MT-1
MIL L 2105 D

MACK GO-J
MAN 342

8113 SAE 90

Universal Gear Oil



Volume: / Art. Nr.:			
4L	MN8113-4	20L	MN8113-20
208L	MN8113-DR	1000L	MN8113-IBC

A mineral simple-composition gear oil for mild operating conditions (low loads and sliding velocities). It may be recommended for the lubrication of accessory equipment to be installed in special vehicles (reducers in autocranes, mechanisms of garbage trucks, side lifting components, etc.) when operating at temperatures no lower than – 18 °C.

Specifications:
SAE 90
API GL-4/GL-5

8114 SAE 140

Universal Gear Oil



Volume: / Art. Nr.:

4L	MN8114-4	20L	MN8114-20
208L	MN8114-DR	1000L	MN8114-IBC

A mineral simple-composition gear oil for mild operating conditions (low loads and sliding velocities). It may be recommended for the lubrication of accessory equipment to be installed in special vehicles (reducers in autocranes, mechanisms on garbage trucks, side lifting components, etc.) when operating at temperatures no lower than 0°C.

Specifications:

SAE 140
API GL-4/GL-5

8111 TG-1 UNIVERSAL

Synthetic Truck Gear Oil



Volume: / Art. Nr.:

		10L	MN8111-10
20L	MN8111-20	60L	MN8111-60
208L	MN8111-DR	1000L	MN8111-IBC

A latest-generation universal energy-conserving completely synthetic all-season gear oil in compliance with the newest world standards. It is suitable for all synchronized and non-synchronized manual transmission types operating under heavy loads and at high speed in extremely low temperatures. It is developed on the basis of the requirements of European and American truck manufacturers.

Specifications:

SAE 75W-80
API GL-4

EATON Manual Transmission
MAN 341 Type Z4
MAN 341 Type E3
VOLVO 97307
ZF TE-ML 01L
ZF TE-ML 02L
ZF TE-ML 16K

8112 TG-2 HYPOLD

Synthetic Truck Gear & Axle Oil



Volume: / Art. Nr.:

		10L	MN8112-10
20L	MN8112-20	60L	MN8112-60
208L	MN8112-DR	1000L	MN8112-IBC

A latest-generation universal energy-conserving completely synthetic all-season gear oil in compliance with the newest world standards. It is suitable for all types of synchronized and non-synchronized manual transmissions (especially heavy-load), transfer cases and main gears with hypoid gears. It is developed on the basis of the requirements of European and American truck manufacturers.

Specifications:

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

EATON Europe
MAN 341 Z2
MAN 341 S1
MB 235.8
MERITOR O-76-N
SCANIA STO 1:0
VOLVO 97312

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



This range includes a complete set of fluids necessary for the operation of mobile equipment: concentrates and ready-made solutions of cooling fluids (mineral, organic, hybrid and lobrid), brake and hydraulic fluids, including the latest generations.

3003 DOT-3

Brake Fluid



Volume: / Art. Nr.:

0,48kg MN3003-05

Specifications:

SAE J1703

FMVSS 116 DOT 3

Others IRAM-AITA-6H3 TIPO 3

Universal synthetic brake fluid based on polyglycols and esters containing corrosion and oxidation inhibitors. It is recommended for use in cars and trucks of early years with drum brakes (and front disc brakes), which are not subjected to too active operation. Provides reliable operation of the brake system at all ambient temperatures due to the increased boiling point ($>215^{\circ}\text{C}$) and excellent low-temperature properties (down to -40°C).

3002 DOT-4

Brake Fluid



Volume: / Art. Nr.:

0,455kg MN3002-05

0,849kg MN3002-1 4,87kg MN3002-5

Specifications:

SAE J1703/J1704

ISO 4925

FMVSS 116 DOT 4

JIS JAPAN K2233

Synthetic brake fluid based on polyglycols and esters, containing corrosion and oxidation inhibitors. Designed for hydraulic systems of all traditional brake devices and clutches. Provides reliable operation of the brake system at any ambient temperature due to the increased boiling point ($>245^{\circ}\text{C}$) and excellent low-temperature properties (up to -40°C).

8990 CENTRAL HYDRAULIC FLUID

Hydraulic Fluid



Volume: / Art. Nr.:

		450ml	MN8990-045
1L	MN8990-1	208L	MN8990-DR

High-quality and highly effective multi-purpose synthetic hydraulic fluid with ashless additives, developed for central hydraulic systems of modern cars – Central Hydraulic Fluid (CHF). Designed based on the highest requirements of car manufacturers for use over the entire life of the vehicle.

Specifications:

VW TL 52 146
VW G 004 000
VOLVO 8713089
MAN M 3289
BMW 81 22 9 407 758
GM B 040 0070
OPEL B 040 0070

FIAT 9.55550-AG3
ZF TE-ML 02K
ZF TE-ML 09B

8301 LHM+ FLUID

Hydraulic Fluid



Volume: / Art. Nr.:

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

Special synthetic low-viscosity green fluid for centralized (combined) brake and hydraulic systems, power steering systems, hydropneumatic suspension systems and brakes in CITROËN, MERCEDES-BENZ, PEUGEOT and VOLKSWAGEN vehicles.

Specifications:

DIN 51524-3
ISO 7308

FIAT 9.55597
IVECO 18-1823
NEW HOLLAND NH-610A
PSA B71 2710
SDFG OF1611S

8302 LDS FLUID

Hydraulic Fluid



Volume: / Art. Nr.:

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

Synthetic red fluid based on carefully selected base oils of the highest quality. Designed for CITROËN passenger cars equipped with HYDRActive 3 hydraulic systems, as well as electrohydraulic power steering systems (EHPS) installed on PSA CITROËN, PEUGEOT, RENAULT and other vehicles where PSA Standard B71 2710 is required.

Specifications:

DIN 51 524-3
ISO 7308
PSA S71 2710

8203 ATF-A PSF

Power Steering Fluid



Volume: / Art. Nr.:			
		1L	MN8203-1
4L	MN8203-4	10L	MN8203-10
20L	MN8203-20	60L	MN8203-60
208L	MN8203-DR	1000L	MN8203-IBC

Universal all-season mineral oil for power steering systems, automatic transmissions of older generations, torque converters and hydraulic clutches of all types of vehicles. Designed following GM requirements.

Specifications:
ALLISON C3
CATERPILLAR TO-2
GM ATF Type A Suffix A

8970 POWER STEERING FLUID

Power Steering Fluid



Volume: / Art. Nr.:			
450ml	MN8970-045	1L	MN8970-1

Special synthetic fluid (contains PAO) for HONDA and ACURA power steering systems developed in accordance with HONDA standards.

Specifications:
HONDA Ultra PSF-II
HONDA PSF Type S
HONDA PSF Type V
HONDA 08206-9002
ACURA 08206-9002A

8980 POWER STEERING FLUID

Power Steering Fluid



Volume: / Art. Nr.:			
450ml	MN8980-045	208L	MN8980-DR

High-quality synthetic hydraulic fluid designed for modern power steering systems and clutch hydraulic systems of VOLKSWAGEN, MERCEDES-BENZ and CHRYSLER vehicles. Designed based on DAIMLER requirements.

Specifications:
MB 236.3
ZF TE-ML 03D
ZF TE-ML 04D
ZF TE-ML 09
ZF TE-ML 11
ZF TE-ML 14A
ZF TE-ML 17C

4011/4111 ANTIFREEZE AG11

Ready-to-use Longterm Coolant Fluid (-40 °C)
Concentrated Longterm Coolant Fluid

**4211 COOLANT G11**

Ready-to-use Coolant Fluid
(-10 °C)

Volume: / Art. Nr.:

		1L	MN4011/MN4111/MN4211-1
5L	MN4011/MN4111/MN4211-5	10L	MN4011/MN4111/MN4211-10
20L	MN4011/MN4111/MN4211-20	60L	MN4011/MN4111/MN4211-60
208L	MN4011/MN4111/MN4211-DR	1000L	MN4011/MN4111/MN4211-IBC

A silicate (inorganic – IAT Inorganic Acid Technology) solution, designed for a year-round use in any modern cooling systems containing copper, brass and aluminium components for which the use of an ethylene-glycol-based antifreeze is recommended.

4012/4112 ANTIFREEZE AF12+

Ready-to-use Longlife Coolant Fluid (-40 °C)
Concentrated Longlife Coolant Fluid

**4212 COOLANT G12+**

Ready-to-use Coolant Fluid
(-10 °C)

Volume: / Art. Nr.:

		1L	MN4012/MN4112/MN4212-1
5L	MN4012/MN4112/MN4212-5	10L	MN4012/MN4112/MN4212-10
20L	MN4012/MN4112/MN4212-20	60L	MN4012/MN4112/MN4212-60
208L	MN4012/MN4012/MN4012-DR	1000L	MN4012/MN4112/MN4212-IBC

A carboxylated (organic – OAT Organic Acid Technology) solution, designed for a year-round use in any modern cooling systems for which the use of ethylene-glycol-based antifreeze is recommended. It ensures a reliable protection of any cooling system.

4013/4113 ANTIFREEZE AG13

Ready-to-use Hightec Coolant Fluid (-40 °C)
Concentrated Hightec Coolant Fluid

**4213 COOLANT G13**

Ready-to-use Coolant Fluid
(-10 °C)

Volume: / Art. Nr.:

		1L	MN4013/MN4113/MN4213-1
5L	MN4013/MN4113/MN4213-5	10L	MN4013/MN4113/MN4213-10
20L	MN4013/MN4113/MN4213-20	60L	MN4013/MN4113/MN4213-60
208L	MN4013/MN4013/MN4013-DR	1000L	MN4013/MN4113/MN4213-IBC

A hybrid (HOAT – Hybrid Organic Acid Technology) high-technology antifreeze with excellent operating characteristics intended for a year-round use in any modern cooling system for which the use of mono-ethylene-glycol-based antifreeze is recommended.

Specifications:

ASTM USA D3306
AFNOR FRANCE NF R15-601
BS 6580:2010

VW TL 774 C
OPEL/VAUXHALL GME L1301
BMW/MINI GS 94000
CHRYSLER MS-7170
MAN 324 Typ NF
MTU MTL 5048
TESLA

Specifications:

SAE J1034
ASTM USA D3306/D4656
ASTM USA D4985/D6210
AFNOR FRANCE NF R15-601
(except for RA)
BS 6580:2010

FVV GERMANY Heft R443
KSM SOUTH KOREA 2142
MIL BELGIUM BT-PS-606-A
MIL FRANCE DCSEA 615/C
MIL ITALY E/L-1415b
MIL SWEDEN FSD 8704
NATO S-759

OENORM AUSTRIA V5123
UNE SPAIN 26-361-88/1
ASTON MARTIN
VW TL 774 D/TL 774 F

For complete list of specifications
please visit www.mannol.de

Specifications:

SAE J1034
ASTM USA D3306/D4340
ASTM USA D4985
AFNOR FRANCE NF R15-601
BS 6580:2010

BMW/MINI GS 94000
OPEL/VAUXHALL GME L1301
OPEL GM QL130100
CHRYSLER MS-7170
FORD ESE-M978B4H-A
FORD AF Plus
GM 1825M/1899M/SATURN

JAGUAR
JOHN DEERE
MAN 324 Typ NF
MTU MTL 5048
NATO S-759
MB 325.0

4014/4114 ANTIFREEZE AG13+

Ready-to-use Advanced Coolant Fluid (-40 °C)
Concentrated Advanced Coolant Fluid



4214 COOLANT G13+

Ready-to-use Coolant Fluid
(-10 °C)

Volume: / Art. Nr.:

		1L	MN4014/MN4114/MN4214-1
5L	MN4014/MN4114/MN4214-5	10L	MN4014/MN4114/MN4214-10
20L	MN4014/MN4114/MN4214-20	60L	MN4014/MN4114/MN4214-60
208L	MN4014/MN4114/MN4214-DR	1000L	MN4014/MN4114/MN4214-IBC

A hybrid (HOAT – Hybrid Organic Acid Technology) high-technology solution with excellent operating characteristics intended for a year-round use in any modern cooling system for which the use of mono-ethylene-glycol-based antifreeze is recommended.

4015/4115 ANTIFREEZE AF13++

Ready-to-use High-performance
Coolant Fluid (-40 °C)
Concentrated High-performance
Coolant Fluid



Volume: / Art. Nr.:

		1L	MN4015/MN4115-1
5L	MN4015/MN4115-5	10L	MN4015/MN4115-10
20L	MN4015/MN4115-20	60L	MN4015/MN4115-60
208L	MN4015/MN4115-DR	1000L	MN4015/MN4115-IBC

Low-hybrid (LOBRID) high-technology ecological solution (not requiring being diluted and protecting the vehicle cooling system at up to -40 °C) with excellent operating characteristics, designed for a year-round use in any modern cooling system for which the use of mono-ethylene-glycol-based antifreeze is recommended.

4414 PRO COOL

Ready-to-use Coolant Fluid
for Motorbikes (-40 °C)



Volume: / Art. Nr.:

		1L	MN4414-1
5L	MN4414-5	10L	MN4414-10
20L	MN4414-20	60L	MN4414-60
208L	MN4414-DR	1000L	MN4414-IBC

A hybrid (HOAT – Hybrid Organic Acid Technology) high-technology ready-to-use solution for two-wheeled motor vehicles (not requiring being diluted and protecting the cooling system at up to -40 °C) with excellent operating properties designed for a year-round use in any modern cooling system for which the use of mono-ethylene-glycol-based antifreeze is recommended. It ensures a reliable protection of any cooling system of two-wheeled motor vehicles.

Specifications:

SAE J1034
ASTM USA D3306/D4340
ASTM USA D4985
AFNOR FRANCE NF R15-601
BS 6580:2010

BMW/MINI GS 94000
CHRYSLER MS-7170
FORD ESE-M978B4H-A
FORD AF Plus
GM 1825 M/1899 M
GM SATURN
NATO S-759

JAGUAR
JOHN DEERE
MAN 324 NF
MB 325.0
MTU MTL 5048
OPEL/VAUXHALL GME L1301
OPEL GM QL130100

Specifications:

SAE J1034
ASTM USA D3306/D4656
ASTM USA D4985
AFNOR FRANCE NF R15-601
(except for RA)
BS 6580:2010

CUNA ITALY NC 956-16
FVV GERMANY Heft R443
UNE SPAIN 26-361-88/1
VW TL 774 G/TL 774 J
CUMMINS CES 14603
NATO S-759
IRIZAR

LIEBHERR Minimum LH-01-COL3A
MAN 324 Si-OAT
MB 325.5/325.6
SMART MB 326.0
SCANIA

Specifications:

SAE J1034
ASTM USA D3306/D4656
AFNOR FRANCE NF R15-601
BS 6580

JIS JAPAN K2234
KSM SOUTH KOREA 2142

8303 FORK OIL

Hydraulic Fluid

Specifications:
SAE 10W



Volume: / Art. Nr.:

1L MN8303-1

Universal, synthetic, all-season oil for motorbike forks and shock absorbers with the most popular SAE 10W viscosity. Intended for use in classic and inverted forks of road and off-road motorbikes, mopeds, scooters and other motorbike vehicles where these devices are present.

9894 AIR BRAKE ANTIFREEZE

Air Brake Coolant Fluid



Volume: / Art. Nr.:

450ml MN9894-045

Antifreeze for pneumatic brake systems based on aliphatic alcohols and anti-corrosion additives. Designed for pneumatic brake systems with a tank for the dehumidifier, all types of cars, heavy-duty vehicles, off-road (construction, mining, agricultural) and special equipment.

AD3001 AdBlue®

Fuel System Additive

Specifications:

DIN 70070
ISO 22241-1
ISO 22241-2
ISO 22241-3



Volume: / Art. Nr.:

10L AD3001-10

20L AD3001-20 1000L AD3001-IBC

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.

This range consists of oils for industrial units of the most used viscosities and specifications: compressor, turbine and stationary internal combustion engines. It also includes mineral hydraulic oils for heavy machinery with different characteristics and for different operating conditions.



Volume: / Art. Nr.: 3101 SAE 10W			
10L		MN3101-10	
20L	MN3101-20	60L	MN3101-60
208L	MN3101-DR	1000L	MN3101-IBC

3102 SAE 20W			
10L		MN3102-10	
20L	MN3102-20	60L	MN3102-60
208L	MN3102-DR	1000L	MN3102-IBC

3103 SAE 30			
10L		MN3103-10	
20L	MN3103-20	60L	MN3103-60
208L	MN3103-DR	1000L	MN3103-IBC

M.O. SERIES

Industrial Engine Oil

3104 SAE 40			
10L		MN3104-10	
20L	MN3104-20	60L	MN3104-60
208L	MN3104-DR	1000L	MN3104-IBC

3105 SAE 50			
10L		MN3105-10	
20L	MN3105-20	60L	MN3105-60
208L	MN3105-DR	1000L	MN3105-IBC

A special highest-quality monograde mineral engine oils for medium-load diesel-powered engines with and without a turbocharger operating under various conditions. It was designed especially for VOLVO and CATERPILLAR equipment that requires the presence of corresponding specifications.

Volume: / Art. Nr.: 2101 ISO 32			
5L	MN2101-5	10L	MN2101-10
20L	MN2101-20	60L	MN2101-60
208L	MN2101-DR	1000L	MN2101-IBC

2102 ISO 46			
5L	MN2102-5	10L	MN2102-10
20L	MN2102-20	60L	MN2102-60
208L	MN2102-DR	1000L	MN2102-IBC

2103 ISO 68			
10L		MN2103-10	
20L	MN2103-20	60L	MN2103-60
208L	MN2103-DR	1000L	MN2103-IBC

HYDRO SERIES

Industrial Hydraulic Oil

2104 ISO 100			
10L		MN2104-10	
20L	MN2104-20	60L	MN2104-60
208L	MN2104-DR	1000L	MN2104-IBC

2105 ISO 150			
10L		MN2105-10	
20L	MN2105-20	60L	MN2105-60
208L	MN2105-DR	1000L	MN2105-IBC

Special all-season mineral hydraulic oils created for hydraulic devices of stationary or mobile equipment operating at high and very high operating temperatures. It was developed taking into account the requirements for industrial hydraulic systems operating in the conditions of very high loads, pressures, temperatures and/or velocities.

Specifications:
SAE 10W/20W/30/40/50
API CH-4
MIL L 2104 C

CATERPILLAR Series 3
DAVID BROWN DB OM 616
VOLVO B20
MACK EO-J

Specifications:
ISO VG 32/46/68/100/150
ISO 11158 (HM)
DIN 51524-2 (HLP)

AFNOR FRANCE NF E 48-603
AIST Industrial Hydraulic Oil
CONESTOGA ISO 20763
EATON I-286-S
MAG CINCINNATI P-68/P-69/P-70
PARKER DENISON HF-0/HF-1/HF-2
PARKER DENISON Filterability TP 02100

SPERRY VICKERS I-286-S
US STEEL 126/127

HYDRO HV SERIES

Industrial Hydraulic Oil

Volume: / Art. Nr.: **2201 HV ISO 32**

	10L	MN2201-10		
20L	MN2201-20	60L	MN2201-60	
208L	MN2201-DR	1000L	MN2201-IBC	

2202 HV ISO 46

	10L	MN2202-10		
20L	MN2202-20	60L	MN2202-60	
208L	MN2202-DR	1000L	MN2202-IBC	

2203 HV ISO 68

	10L	MN2203-10		
20L	MN2203-20	60L	MN2203-60	
208L	MN2203-DR	1000L	MN2203-IBC	

2204 HV ISO 22

	10L	MN2204-10		
20L	MN2204-20	60L	MN2204-60	
208L	MN2204-DR	1000L	MN2204-IBC	

All-season mineral paraffin hydraulic oils with a high-viscosity index created for the hydraulic equipment of a mobile or stationary equipment operating at high and extra-high operating temperatures. It was developed taking into account the requirements for industrial hydraulic systems operating in the conditions of extra-high loads, pressures, temperatures and/ or velocities and especially in the conditions of strongly varying temperatures.

HYDRO HV ZINC FREE SERIES

Industrial Hydraulic Oil

Volume: / Art. Nr.: **2208 HV ISO 32**

	10L	MN2208-10		
20L	MN2208-20	60L	MN2208-60	
208L	MN2208-DR	1000L	MN2208-IBC	

2206 HV ISO 46

	10L	MN2206-10		
20L	MN2206-20	60L	MN2206-60	
208L	MN2206-DR	1000L	MN2206-IBC	

All-season mineral hydraulic oils created on the basis of highly-purified basic oils with a high viscosity index and a zinc-free (low-ash) additive package for the most full compliance with specific operating requirements of modern high-load and heat-stressed precision hydraulic systems, including the ones equipped with servo mechanisms and servo valves used in industrial and mobile equipment for which the manufacturer recommends using "zinc-free" hydraulic oils.

COMPRESSOR OIL SERIES

Industrial Compressor Oil

Volume: / Art. Nr.: **2901 ISO 46**

1L	MN2901-1	10L	MN2901-10	
20L	MN2901-20	60L	MN2901-60	
208L	MN2901-DR	1000L	MN2901-IBC	

2902 ISO 100

1L	MN2902-1	10L	MN2902-10	
20L	MN2902-20	60L	MN2902-60	
208L	MN2902-DR	1000L	MN2902-IBC	

2903 ISO 150

	10L	MN2903-10		
20L	MN2903-20	60L	MN2903-60	
208L	MN2903-DR	1000L	MN2903-IBC	

2904 ISO 220

	10L	MN2904-10		
20L	MN2904-20	60L	MN2904-60	
208L	MN2904-DR	1000L	MN2904-IBC	

Specials highly-purified paraffin ashless mineral compressor oils with an extended replacement age. It ensures a stable and continuous operation of the equipment throughout the entire operation period.

Specifications:

ISO VG 32/46/68/22
ISO 11158 (HM/HV/HVLP)
SAE MS 1004
DIN 51524-2 (HM)
DIN 51524-3 (HVLP)

AIST 126/127
ASTM USA D6158
ANSI AGMA 9005-E02-RO
BOSCH REXROTH RE 90220
JCMAS P041 HK Hydraulic specification
EATON M-2950-S/I-286-S3
GERMAN STEEL INDUSTRY
SEB 181222

MAG CINCINNATI P-68/P-69/P-70
PARKER DENISON HF-0/HF-1/HF-2
SPERRY VICKERS M-2950-S/I-286-S3
GM LS2

Specifications:

ISO VG 32/46
ISO 11158 (HM/HV/HVLP)
SAE MS 1004
DIN 51524-2 (HM)
DIN 51524-3 (HVLP)

AIST 126/127
ASTM USA D6158
ANSI AGMA 9005-E02-RO
BOSCH REXROTH RE 90220
JCMAS P041 HK Hydraulic specification
GERMAN STEEL INDUSTRY
SEB 181222

EATON M-2950-S/I-286-S3
MAG CINCINNATI P-68/P-69/P-70
PARKER DENISON HF-0/HF-1/HF-2
SPERRY VICKERS M-2950-S/I-286-S3
GM LS2

Specifications:

ISO VG 46/100/150/220
ISO DP 6521 (L-DAA/L-DAB)
ISO DP 6521 (L-DAG/L-DAH)
DIN 51506 (VBL/VCL/VDL)
DIN 51515-1 (L-TD)/-2 (L-TG)
DIN 51517-2 (CL)/51524-1/-2

AFNOR FRANCE NF E 48-603
BROWN BOVERI HTGD 90117
BSI GB BS 489
GE GEK 32568 A/GEK 32568 C
CEGB 207001
MAG CINCINNATI P-38/P-55/P-54
MAG CINCINNATI P-57/P-62

MITSUBISHI E00-87182
MIL L 17672 D
PARKER DENISON HF-0
SIEMENS TLV 9013
VDMA 24568
US STEEL 120

TURBINE SERIES

Industrial Turbine Oil

Volume: / Art. Nr.:		2301 ISO 32	
10L	MN2301-10		
20L	MN2301-20	60L	MN2301-60
208L	MN2301-DR	1000L	MN2301-IBC

		2302 ISO 46	
10L	MN2302-10		
20L	MN2302-20	60L	MN2302-60
208L	MN2302-DR	1000L	MN2302-IBC

		2303 ISO 68	
10L	MN2303-10		
20L	MN2303-20	60L	MN2303-60
208L	MN2303-DR	1000L	MN2303-IBC

All-season mineral paraffin hydraulic oils with a high-viscosity index created for the hydraulic equipment of a mobile or stationary equipment operating at high and extra-high operating temperatures. It was developed taking into account the requirements for industrial hydraulic systems operating in the conditions of extra-high loads, pressures, temperatures and/or velocities and especially in the conditions of strongly varying temperatures.

GEAR OIL

Industrial Gear Oil

Volume: / Art. Nr.:		2801 ISO 220	
20L	MN2801-20	60L	MN2801-60
208L	MN2801-DR	1000L	MN2801-IBC

		2804 ISO 64	
20L	MN2804-20	60L	MN2804-60
208L	MN2804-DR	1000L	MN2804-IBC

		2805 ISO 100	
20L	MN2805-20	60L	MN2805-60
208L	MN2805-DR	1000L	MN2805-IBC

An industrial mineral reduction gear oil for use in gear transmissions of modern imported and domestic equipment requiring the use of high-quality oils with enhanced antiwear and anti-scuffing EP (Extreme Pressure) properties.

1103 EMULSION

Water-miscible Emulsion



Volume: / Art. Nr.:	
20L	MN1103-20
208L	MN1103-DR

Water-miscible greasing and cooling fluid (GCF) with a high content of mineral oil and a highly effective additive package, providing multi functionality and stability of the emulsion for machining ferrous and non-ferrous metals.

Specifications:

ISO VG 32/46/68
ISO DP 6521 (DAA/DAB)
ISO DP 6521 (DAH/DAG)
DIN 51506 (VBL/VDL/VCL)
DIN 51524-1/-2/-3/51517-2
DIN 51515-1 (L-TD)/-2(TG)

AFNOR FRANCE NF E 48-603
BSI GB BS 489
BROWN BOVERI HTGD 90117
GE GEK 32568 A/GEK 32568 C
CEGB 207001
MIL L 17672 D
VDMA 24568

MAG CINCINNATI P-38/P-55/P-54
MAG CINCINNATI P-57/P-62
MITSUBISHI E00-87182
PARKER DENISON HF-0

For complete list of specifications
please visit www.mannol.de

Specifications:

ISO VG 64/100/220
ISO 6743-6 (CKC)
ISO 12925-1 Type CKC/CKD
DIN 51517-3

ANSI AGMA 252.04
US STEEL 224

This range of oils includes oils with special properties for agricultural and construction machinery: transmission and hydraulic oils that meet the requirements of CATERPILLAR TO-4, STOU universal engine and transmission oils and UTTO universal tractor transmission oil.



TO-4 POWERTRAIN OIL SERIES

Heavy Duty off-highway Fluid

Volume: / Art. Nr.: **2601 SAE 10W**

	10L	MN2601-10		
20L	MN2601-20	60L	MN2601-60	
208L	MN2601-DR	1000L	MN2601-IBC	

2602 SAE 30

	10L	MN2602-10		
20L	MN2602-20	60L	MN2602-60	
208L	MN2602-DR	1000L	MN2602-IBC	

2603 SAE 50

	10L	MN2603-10		
20L	MN2603-20	60L	MN2603-60	
208L	MN2603-DR	1000L	MN2603-IBC	

Special all-season transmission-hydraulic mineral oil designed for use in hydraulic systems, transmissions and gearboxes (including power ones), on-board gearboxes of other devices of off-road equipment with and without low-load brakes (clutches).

Specifications:

SAE 10W/30/50

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

MULTIFARM STOU SERIES

Agricultural Machinery Oil



Volume: / Art. Nr.: **2501 SAE 10W-30**

5L	MN2501-5	10L	MN2501-10	
20L	MN2501-20	60L	MN2501-60	
208L	MN2501-DR	1000L	MN2501-IBC	

2502 SAE 10W-40

	10L	MN2502-10		
20L	MN2502-20	60L	MN2502-60	
208L	MN2502-DR	1000L	MN2502-IBC	

Genuinely universal engine-transmission all-season semi-synthetic (HC-synthese) engine oil for modern diesel-powered engines of agricultural equipment with and without a turbocharger operating under harsh conditions as well as for manual transmissions, "wet"-type brake systems and even hydraulic systems of tractors.

Specifications:

SAE 10W-30/10W-40
API CG-4/CF-4/CF/CE/CD/SF
API GL-4
ACEA E3
DIN 51524-3 HVLP

ALLISON C4
CASE I H MS 1204/1206/1207/1209
CASE NEW HOLLAND MAT 3525/3526
CATERPILLAR TO-2
EATON M-2950-S/I-286-S
FORD ESN-M2C86-B/ESN-M2C86-C
FORD ESN-M2C134-D

FORD M2C159-B/WSS-M2C159-C
FORD NEW HOLLAND:
82009201/82009202/82009203
JOHN DEERE J27/J20C/J20D
MASSEY FERGUSON: M1135/
M1139/M1143/M1144/M1145

For complete list of specifications
please visit www.mannol.de

2701 MULTI UTTO WB101
Agricultural Machinery Oil

Volume: / Art. Nr.:			
	10L	MN2701-10	
20L	MN2701-20	60L	MN2701-60
208L	MN2701-DR	1000L	MN2701-IBC

Universal and multi-functional mineral all-season tractor oil for farm holdings and tractors, agricultural vehicles with very high operating characteristics. Its main purpose: an oil for on-board gearboxes with a standard replacement interval. It complies with VOLVO 97303 requirements. It is also suitable for mechanical gearboxes with and without synchronizers, transmissions (including power transmissions), back axles, hydraulic systems (including the ones integrated with a mechanical gearbox) and other equipment that requires Universal Tractor Transmission Oil (UTTO) grade oil. It is particularly suitable for the reduction of vibration in “wet” brake systems and power-take off.

2703 AGROFARM U
Universal Agricultural Machinery Oil
(UTTO)

Volume: / Art. Nr.:			
	10L	MN2703-10	
20L	MN2703-20	208L	MN2703-DR

All-season mineral gear-hydraulic oil for tractors and other agricultural machinery with high viscosity and performance characteristics. Main purpose: oil for transmissions, including final reduction gears fitted with wet brakes and clutches. Also suitable for use in manual gearboxes with and without synchronisers, transmissions (including power transmissions), rear axles, hydraulic systems (including those combined with a gearbox) and in other equipment requiring a “Universal Tractor Transmission Oil” (UTTO).

7406 TRAKTOR SUPEROIL
Agricultural Machinery Oil



Volume: / Art. Nr.:			
5L	MN7406-5	10L	MN7406-10
20L	MN7406-20	60L	MN7406-60
208L	MN7406-DR	1000L	MN7406-IBC

An all-season economy-class mineral engine oil for modern high-load and high-speed 4-stroke diesel-powered engines of tractors with and without a turbocharger operating under harsh conditions. It was developed specially for ensuring the protection of the agricultural equipment and receiving the maximum return regardless of its operating conditions.

Specifications:

API GL-4
DIN 51524-2

ALLISON C4
VOLVO VCE WB 101/97303
CASE IH MS 1204/MS 1206
CASE IH MS 1207/ MS 1209
CASE NEW HOLLAND MAT 3525
CATERPILLAR TO-2

PARKER DENISON HF-0/HF-1
PARKER DENISON HF-2
FORD NEW HOLLAND:
ESN-M2C41-B/M2C86-A/-B/-C
ESN-M2C134-A/-C/-D
ZF TE-ML 03E/TE-ML 05F
ZF TE-ML 06E/TE-ML 06F

ZF TE-ML 06K/TE-ML 17E/
ZF TE-ML 21F

For complete list of specifications
please visit www.mannol.de

Specifications:

ISO Viscosity Grade 100
API GL-4
DIN 51524-2 (HLP)

JOHN DEERE J20C
CATERPILLAR TO-2
FORD ESN-M2C134-D
MASSEY FERGUSON CMS M1135
MASSEY FERGUSON CMS M1143
MASSEY FERGUSON CMS M1145

Specifications:

SAE 15W-40
API SG/CD

A range of oils of various viscosities with high neutralising properties for marine diesels of various types and operating on fuels of different composition and quality in terms of viscosity and sulphur content.



MARINE 12-SERIES

Marine Oil

Specifications:

SAE 30/40
API CF
TBN 12

Volume: / Art. Nr.: **1230 SAE 30**

10L MN2404-10

1240 SAE 40

208L MN2404-DR 1000L MN2404-IBC 208L MN2405-DR 1000L MN2405-IBC

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. 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.

2406 MARINE 3040

Marine Oil

Specifications:

SAE 40
API CF-4
TBN 30

Volume: / Art. Nr.:

208L MN2406-DR 1000L MN2406-IBC

High-alkaline mineral motor oil for medium-speed heavy marine diesel engines operating on fuel oil with a sulfur content of up to 4.0 %. Applicable for auxiliary engines. It is intended for use in general and separate lubrication systems of medium-speed diesel engines of ships of the sea transport, fishing and river fleets and in industry and power plants. It is suitable both for lubricating cylinders and bearings of a cylinder-piston group of some types of crosshead diesel engines.

The MANNOL high-tech product range includes the latest developments in car cares products, oil additives and greases. Our speciality is the thorough and detailed analysis of every individual situation, depending on the complexity of the intended purpose, the type of materials used as well as the climatic and other conditions in different world regions. Thanks to the professional approach to product development we have created affordable and extremely effective products that help save vehicle owners' time and money.



8028 / 8048 / 8115 / 8125

**UNIVERSAL MULTI-MoS2
GREASE EP2 ESTER**



Weight: / Art. Nr.:

100g 8028-01	230g 8028-023	4,5kg 8028-4,5	9kg 8048
400g 8028-04	800g 8028-08	18kg 8115	180kg 8115

Universal ester containing multipurpose extreme pressure plastic lithium grease based on highly refined mineral oil base with extreme pressure and wear-resistant additives of molybdenum disulfide and lubricating graphite, which has high heat resistance, sealing ability and provides excellent anti-friction and extreme pressure characteristics.

Specifications:

NLGI 2
DIN 51502 KPF2N-30

8100 / 8094 / 8029 / 8049

**HIGH TEMPERATURE
GREASE LC2 ESTER**



Weight: / Art. Nr.:

100g 8100	230g 8094
400g 8029-04	9kg 8049
18kg 8029-18	18kg 8029-180

Universal ester containing heat-resistant anti-wear grease made on the basis of highly refined mineral oils with a thickener based on thermo-stable complex lithium soap with the addition of special anti-wear, antioxidant and anti-corrosion additives, designed for long-term lubrication of ball and roller bearings operating under high thermal and mechanical loads.

Specifications:

NLGI 2
DIN 51502 KP2P-30

meets:
MB 265.1
MAN TL 284

8026 / 8093 / 8046 / 8127 MARINE LONG TERM GREASE WR2 ESTER



Weight: / Art. Nr.:

100g	8026-01	230g	8093
400g	8026-04	9kg	8046
18kg	8026-18	180kg	8127

Multipurpose ester containing waterproof grease made on the basis of highly refined mineral oils with a thickener based on mixed lithium-calcium soap with the addition of special adhesive, antioxidant and anticorrosive additives.

Specifications:

NLGI 2
DIN 51502 KP2K-30

meets:
NATOG460

8098 / 8095 / 8106 / 8027 / 8047 / 8114 / 8124 UNIVERSAL MULTIPURPOSE GREASE MP2 ESTER



Weight: / Art. Nr.:

100g	8098	230g	8095
400g	8027-04	800g	8106
4,5kg	8027	9kg	8047
18kg	8114	180kg	8124

Multi-purpose long-life lithium grease based on ester technology, contains special anti-oxidation and anti-corrosion additives.

Specifications:

NLGI 2
DIN 51502 K2K-30

8050 / 9985 / 9987 LOW VISCOSITY GREASE ESTER



Weight: / Art. Nr.:

		800g	9985
9kg	8050	18kg	9987

Lithium-calcium ester containing semi-fluid grease for the lubrication of slow-speed gearboxes and centralized lubrication systems (CCS) of trucks and buses, meeting the DAIMLER-BENZ requirements (sheet 264) for truck lubricants and the requirements of MAN TL 283. Produced on the basis of highly refined mineral oils with the application of anti-wear, depressant, anticorrosive and antioxidant additives.

Specifications:

Li-EP 00/000

meets:
MAN TL 283
MB 264

8117 UNIVERSAL MULTI-MoS₂ GREASE EP3 ESTER



Volume: / Art. Nr.:
18kg 8117

Universal multipurpose extreme pressure plastic lithium grease based on highly refined mineral oil base with extreme pressure and wear-resistant additives of molybdenum disulfide and lubricating graphite, which has high heat resistance, sealing ability and provides excellent anti-friction and extreme pressure characteristics.

Specifications:

MAN TL 283
MB 264
Others Li-EP 00/000

8401 EXTREME PRESSURE MULTIPURPOSE GREASE EPO ESTER



Volume: / Art. Nr.:
18kg 8401

Semi-liquid multipurpose anti-scuffing lithium-calcium premium class grease with extended service life, based on selectively purified high-viscosity oils and group V oils with the addition of anti-wear, anti-oxidant and anti-corrosive organic additives.

Specifications:

NLGI 0
DIN 51502 MP0K-40
ISO 6743-9 L-XDCEA 0

8402 EXTREME PRESSURE MULTIPURPOSE GREASE EP1 ESTER



Volume: / Art. Nr.:
18kg 8402

Semi-liquid multipurpose anti-scuffing lithium-calcium premium class grease with extended service life, based on selectively purified high-viscosity oils and group V oils with the addition of anti-wear, anti-oxidant and anti-corrosive organic additives. Intended for centralised lubrication systems of friction units of transport, agricultural, off-road and other equipment exposed to medium and high loads.

Specifications:

NLGI 1
DIN 51502 KP1K-30
ISO 6743-9 L-XBCEA 1

8031 LITHIUM GREASE LT-43 ESTER



Volume: / Art. Nr.:

	400g	8031-04
800g	8031-08	4.5kg 8031-4.5
9kg	8031-9	18kg 8031-18

Multipurpose automotive grease for general use, made on the basis of highly refined mineral oils with a thickener based on lithium soap with the addition of synthetic esters and a functional additive package. Has consistency class NLGI 3.

8121 WHITE GREASE

White Lithium Grease



Volume: / Art. Nr.:

450ml MN8121

White mineral grease based on lithium soap, which has excellent heat resistance and resistance to leaching. Designed for machining parts of mechanisms, bearings, joints, gears and other gears, threaded connections. The product reduces friction, repels moisture, prevents dampening, protects against corrosion, and prevents freezing of elements. The tool is applicable in the car and in everyday life.

9881 LITHIUM SPRAY

Lithium Aerosol Grease



Weight: / Art. Nr.:

400ml MN9881

Universal water-resistant lithium grease in the form of an aerosol for lubricating metal, plastic and rubber parts of cars, motorcycles, electrical equipment and other equipment, as well as in the office and at home. Effectively protects against moisture, corrosion and wear.

Specifications:

NLGI 3

DIN 51502: K3K 30

ISO 6743-9: CCH-3

9943 MOTOR DOCTOR +ESTER

Engine Oil Additive



Volume: / Art. Nr.:

450ml MN9943-045

Innovative multifunctional engine protectant by stabilising the pressure in the lubrication system – an additive for engine oils based on synthetic esters (Group V oils). It is a complex product: a viscosity stabiliser protecting the oil from liquefaction, a sealant of the engine lubrication system and a friction modifier. It is suitable for all types of four-stroke engines – diesel and petrol engines and all types of oils – synthetic, semi-synthetic, mineral, including those containing esters.

9957 INJECTOR CLEANER

Fuel Additive



Volume: / Art. Nr.:

250ml MN9957-025

Universal cleaner for fuel systems of gasoline engines (atmospheric and turbocharged). Designed for multipoint injection (MPI) and direct (GDI) injection engines, suitable for carburetor engines. Developed with the latest generation detergent. Recommended for gasoline engines equipped with exhaust gas cleaning systems, including catalytic converters.

9955 CETANE PLUS

Fuel Additive



Volume: / Art. Nr.:

450ml MN9955-045

A special additive in diesel fuel that increases the cetane number and has cleaning properties. It is suitable for any type of diesel fuel and all types of diesel engines (atmospheric and turbocharged) with any fuel systems, equipped and not equipped with diesel particulate filters and catalysts.



9950 BENZIN ESTER ADDITIVE

Fuel Additive



Volume: / Art. Nr.:

	100ml	MN9950-01
250ml	MN9950-025	450ml MN9950-045

The latest development - a lubricating additive in petrol. It is intended for all types of fuel systems of petrol engines, first of all - for engines with direct fuel injection into cylinders. In diesel engines, such a power system was introduced earlier and showed its effectiveness, but also found a number of problems related to the lack of quality of lubrication of moving metal parts of the fuel system, and especially the high pressure fuel pump.



9939 BURNING BOOSTER

Fuel Additive



Volume: / Art. Nr.:

	450ml	MN9939-045
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Fuel combustion Activator for all types of gasoline engine fuel systems based on synthetic esters. Designed to reduce fuel consumption and protect the engine from the consequences of using low-quality (surrogate) gasoline. When mixed with gasoline, it weakens intermolecular bonds, orders the spatial structure of hydrocarbons and makes it more uniform, which makes it easier for oxygen molecules to access them, which increases the completeness of combustion (oxidation) of gasoline and reduces its consumption.

9954 OCTANE PLUS

Fuel Additive



Volume: / Art. Nr.:

	450ml	MN9954-045
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A special additive in gasoline that increases the octane number and has detergent properties. Suitable for all types of gasoline and all types of gasoline engines (atmospheric and turbocharged), with any number of valves, equipped and not equipped with gasoline particulate filters and catalysts.

9991 MOLIBDEN ADDITIVE

Engine Oil Additive



Volume: / Art. Nr.:

300ml MN9991-030ME

An additive in engine and/or transmission (for mechanical transmissions) oil to reduce friction and wear, which is provided by an extremely stable colloidal dispersion of natural molybdenum disulfide (MoS_2) in the base oil. It forms a strong layered film with an unsurpassed anti-friction effect on all rubbing surfaces, which persists even when the oil is completely leaked.

9900 MOTOR FLUSH

Engine Oil Additive



Volume: / Art. Nr.:

300ml MN9900-030ME

Special cleaner for removing sediments, dirt, sludge and wear products of engine parts, including the most inaccessible elements of the oil system. Product properties: Cleans the oil system and filter nets of oil pumps. During the washing process, it provides reliable lubrication, preventing wear of engine parts. Due to the unique composition of detergent-dispersing additives, it guarantees highly effective and safe removal of carbon deposits, including from the bottom of the piston. Removes both oil-soluble and non-oil-soluble contaminants.

9990 MOTOR DOCTOR

Engine Oil Additive



Volume: / Art. Nr.:

300ml MN9990-030ME

Modern multifunctional additive in engine oil – a viscosity stabilizer designed to restore oil pressure and reduce its consumption in engines with high mileage.

Product properties: a special modifier increases the oil viscosity index, which prevents oil from entering the combustion chamber, which in turn reduces soot formation and eliminates exhaust gas smoke. Anti-wear components minimize wear on engines with any mileage and extend their service life. Improves the stability and strength of the oil film on the rubbing parts of the engine, which facilitates cold start and reduces starting wear.

9932 RUST DISSOLVER

Rust-Dissolving Molybdenum
Disulfide Solution



Volume: / Art. Nr.:

450ml MN9932

A fast – penetrating and fast-acting rust dissolving and removing agent with excellent anti-friction and water-repellent properties. It allows you to quickly and safely mount and dismantle hardware of all types, as well as lubricates and protects various movable joints from corrosion: door locks and hinges; levers for driving carburetor dampers; telescopic antennas; fasteners for body and chassis elements, etc. Contains substances which gradually release, during the operation, the molybdenum disulfide.

9887 / 9880 COPPER SPRAY

Copper Paste Aerosol



Volume: / Art. Nr.:

250ml MN9887 500ml MN9880

Universal separating copper aerosol lubricant for various equipment elements operating under any loads (including high loads), and exposed to high temperatures and/or high humidity and/or aggressive environments. It is used to ensure easy disassembly of connections after long-term operation. Eliminates their coupling with each other under the influence of a variety of factors.

9672 MONTAGE CLEANER

Assembly and parts cleaner



Volume: / Art. Nr.:

600ml MN9672

A special high – performance cleaner for metal car parts. Suitable for parts made of any metals and alloys; has excellent cleaning properties; applicable to brake pads and discs, clutch and transmission parts, tools, etc. Application: Spray the cleaner on the dirty parts and in their joints and let it drain. After the solvents have evaporated, the parts remain clean and fat-free.

9668 TAR REMOVER

Tar and Insect Remover



Volume: / Art. Nr.:

450ml MN9668

An additive in engine and/or transmission (for mechanical transmissions) oil to reduce friction and wear, which is provided by an extremely stable colloidal dispersion of natural molybdenum disulfide (MoS_2) in the base oil. It forms a strong layered film with an unsurpassed anti-friction effect on all rubbing surfaces, which persists even when the oil is completely leaked.

9931 TEXTILE FOAM

Engine Oil Additive



Volume: / Art. Nr.:

650ml MN9931

Textile Foam is a highly effective foam cleaner for textiles. Removes various dirt from textile elements of the car interior (seats, doors, etc.), furniture upholstery, carpets, fabrics, etc.)

9895 / 9898 / 9892 / 9899 / 9889

M-40 LUBRICANT

Multifunction Lubricant



Weight: / Art. Nr.:

100ml 9895

200ml 9898 400ml 9892

450ml 9899 5l 9889

M-40 Lubricant is a universal (penetrating, cleaning, anticorrosive, moisture – displacing, anti-squeaking, etc.) aerosol lubricant. It has unique lubricating and protective properties and has a wide range of applications. Ideal for professional and home use. It is a highly effective mixture of fast-penetrating active solvents and oils.

The main classifications of oils are:

by viscosity – **SAE**

by quality – **ACEA** **API** **ILSAC**

The level of quality directly depends on the basis on which the oil is made, synthetic, semi-synthetic or mineral. Oils may contain special additives and have specific properties, such as low viscosity.



1.1. SAE classification

Viscosity is the most important characteristic of motor oils. For them today, the classification according to the SAE J-300 standard established by SAE (Society of Automotive Engineers) is considered generally accepted. It contains 6 winter classes (with the letter W) and the latest edition of 9 summer classes (table 1.1.). All-season oils have a double designation, and the class indicated by the first gives a winter characteristic, and the second summer: SAE 0W-40; 10W-40; 20W-50. The second figure characterizes the kinematic viscosity (KV) which is measured by special instruments – viscometers at a temperature of 100 °C for motor oils. **It is impossible to correctly evaluate KV in other ways - including “by eye”!**

Table 1.1 SAE J-300 engine oil classification

Class By SAE	Low temperature dynamic viscosity		High temperature viscosity		
	Turnability	Pumpability	KV at 100 °C		HTHS
	Maximum viscosity, MPa * s, at the appropriate temperature		Min	Max	Min
0W	6200 at – 35 °C	60000 at –40 °C	3,8		
5W	6200 at – 30 °C	6200 at – 35 °C	3,8		
10W	6200 at – 25 °C	6200 at – 30 °C	4,1		
15W	6200 at – 20 °C	6200 at – 25 °C	5,6		
20W	6200 at – 15 °C	6200 at – 20 °C	5,6		
25W	6200 at – 10 °C	6200 at – 15 °C	9,3		
8			4,0	<6,1	1,7
12			5,0	<7,1	2,0
16			6,1	<8,2	2,3
20			6,9	<9,3	2,6
30			9,3	<12,5	2,9
40			12,5	<16,3	3,5 ⁽¹⁾
40			12,5	<16,3	3,7 ⁽²⁾
50			16,3	<21,9	3,7
60			21,9	<26,1	3,7

(1)– for classes SAE 0W-40, 5W-40, 10W-40

1.1. API classification

The most known classification by scope and level of performance is the classification of the API (American Petroleum Institute). It subdivides oils into two categories: “S” (Service) – oils for gasoline engines of cars and “C” (Commercial) – diesel oils for trucks, tractors, buses, off-road construction and agricultural machinery. In each of these categories, performance levels (classes) are indicated in Latin letters alphabetically in accordance with the increase in performance levels, for example: SL, SM, SN, SP. Universal oils for use in both types of engines are denoted by a slash: SL / SF. Classes in their respective categories are backward compatible, with the exception of FA-4. As a rule, the last 5 classes are valid; they are presented in table 1.2.

Table 1.2. API motor oil classification

Class API	Scope and conditions of use
Service Category	
SL	In accordance with the requirements of automobile manufacturers, motor oils of this class are used in multi-valve, turbocharged engines operating on lean fuel mixtures that meet modern high environmental requirements as well as energy conservation.
SM	Motor oils of modern gasoline (multi-valve, turbocharged) engines. They, in comparison with API SL, have increased indicators of resistance to oxidation and premature wear of engine parts, as well as improved low-temperature properties.
SN	The main difference between this class and the previous ones is the limited phosphorus content for compatibility with modern systems for neutralizing GH, as well as integrated energy saving. Oils of this class approximately correspond to ACEA C3, C4 without correction for HTHS viscosity. The API SN class was approved in October 2010.
SN+	The SN + class has all the properties of the SN class and is designed to prevent the phenomenon of premature ignition of fuel in turbocharged engines – LSPI (Low Speed Pre-Ignition).

Legend: **KV**, mm²/s or cSt - kinematic viscosity;
HTHS, MPa*s - dynamic viscosity measured at high temperature – 150 °C and high shear rate of 106 s-1. Using this indicator, it is customary to evaluate the energy loss to overcome the internal friction of the oil film when the engine is running. The lower the HTHS, the more energy-efficient the oil. However, this indicator has a limit below which the oil film becomes unstable - 2.6 MPa * s;
EG - exhaust gases;
EGR - EG recirculation system (Exhaust Gas Recirculation);
DPF - diesel particulate filter;
TWC - Three-way catalytic converters.

Class API	Scope and conditions of use
SP	The class came into effect on May 1, 2020 for the latest small-sized engines with direct injection of gasoline (GDI), turbocharging and diesel particulate filters (GPFs). These oils are highly resistant to LSPI (Low Speed Pre-Ignition) throughout the entire replacement interval, minimize engine and chain wear, provide excellent corrosion protection, and increased oxidation stability, thereby minimizing deposits, varnishes, and sludge. Compatible with all EG neutralization systems.
Commercial Category	
CG-4	Oils designed for 4-T diesel engines of off-road vehicles and trucks that comply with toxic emissions standards established in the United States since 1994. Compared with the oils of the previous classes, they have better detergent, anti-wear, anti-corrosion properties, less foaming at high temperatures and are well combined with low-sulfur (less than 0.05%) diesel fuel. Replace CF-4 oils in previously released engines.
CH-4	Oils designed for 4-T diesel engines of off-road vehicles and trucks that comply with toxic emissions standards established in the United States since 1998. Compared to CG-4 oils, viscosity growth is better prevented when there is a large accumulation of soot. Ensure the cleanliness of composite pistons with a steel head and a light alloy skirt. Combine well with fuels containing varying amounts of sulfur. Have an increased replacement interval. Backward compatible.
CI-4	Oils designed for 4-T diesel engines of off-road vehicles and trucks, performing according with toxic emissions requirements and equipped with an EGR system. Provide better protection for conventional diesel engines, being backward compatible. They have: improved anticorrosion properties (since water vapor condenses during the cooling of hot gases and a large amount of corrosive acids are formed), increased washing properties (fuel with sulfur content up to 0.5 weight % is allowed in EGR engines, which contributes to the accumulation of corrosive acids during the combustion of sulfur dioxide); increased dispersing properties (lowering the maximum combustion temperature leads to the formation of more soot); increased thermo-oxidative stability (operating oil temperature increased to 130 °C); low volatility (loss of evaporation under the influence of gases at a working temperature of 370 °C is reduced).
CI-4 +	CI-4 + oils have the same properties as CI-4, but have a higher level of protection against the increase in viscosity associated with soot and the loss of viscosity associated with shear.
CJ-4	The class was introduced in 2006 for high-speed 4-T engines designed to comply with the 2007 EG toxicity standards on highways. CJ-4 oils allow the use of fuels with sulfur contents up to 500 ppm (0.05% of mass). However, working with fuels in which the sulfur content exceeds 15 ppm (0.0015% of mass) may affect the performance of exhaust gas purification systems and / or oil change intervals. These oils are compatible with all EG neutralization systems.
CK-4	The class was introduced in 2016 for use in high-speed 4-T diesel engines designed to meet 2017 EG emissions standards on the highway and Tier 4 off-road standards. These oils are formulated for use with diesel fuels with sulfur content up to 500 ppm in all types of equipment. However, their use with fuels greater than 15 ppm sulfur may affect the durability of the EG neutralization systems and / or the oil change interval. API CK-4 oils ensure compatibility and consistency of all EG neutralization systems and especially DPF. They have even higher antioxidant stability, do not lose viscosity due to shear and aeration of the oil, better protect the engine from wear and deposits on the pistons. Do not lose low and high temperature properties and do not increase viscosity when filled with soot. Protect catalyst and DPF.
FA-4	Introduced along with CK-4 for some XW-30 oils, specially developed for use in some models of high-speed 4-T diesel engines that meet the standards of EG emissions on highways of 2017 and for use on main heavy vehicles when using diesel fuel with sulfur content up to 15 ppm (0.0015% of mass). The main difference from the CK-4 is reduced HTHS and increased fuel efficiency. These oils are not interchangeable or do not have backward compatibility with oils of other classes.

1.2. ACEA classification

Since 2016, a new European classification of motor oils has been in force – ACEA (European Automobile Manufacturers Association). Table 1.3 shows the ACEA classes for diesel and low power gasoline engines described in this catalog.

Table 1.3. ACEA engine oil classification

Class ACEA	Scope and conditions of use
Oils for cars and vans with gasoline and diesel engines not equipped with EG neutralization systems and with increased resistance to destruction	
A5/B5-21	Energy-saving oils 2.9 ≥ HTHS ≤ 3.5 For highly accelerated engines with extended drain intervals that allow the use of friction-reducing energy-saving oils. These oils may not be suitable for some engines, and their use must be guided by the operating instructions and technical manuals.
A3/B4-21	For engines with direct fuel injection. HTHS ≥ 3.5.
A7/B7-21	For turbocharged DI gasoline engines as well as turbocharger compressor deposit (TCCD) protection for modern DI diesel engines.
Oils for highly accelerated gasoline and diesel engines of cars and vans equipped with TWC and / or DPF requiring the use of low-ash oils and with increased resistance to destruction. Extend the life of TWC and / or DPF. May not be suitable for some types of engines. May be unsuitable for some engines; when using them, it is necessary to follow the operating instructions and technical manuals.	
C2-21	Energy-saving, low-viscosity oils with an average ash, sulfur and phosphorus content (Mid SAPS). HTHS≥2.9. Provide fuel economy.
C3-21	Oils that do not fall under the category of energy-saving with an average content of ash, sulfur and phosphorus (Mid SAPS). HTHS≥3.5.
C4-21	Oils that do not fall under the category of energy-saving with a low content of ash, sulfur and phosphorus (Low SAPS).
C5-21	Energy-saving, low-viscosity oils with an average ash, sulfur and phosphorus content (Mid SAPS). Provide fuel economy.
C6-21	Providing low speed pre-ignition and wear protection for turbocharged DI gasoline engines as well as diesel turbocharger compressor deposit (TCCD) protection for low SAPS class, being compatible with catalyst & GPF/DPF exhaust aftertreatment systems.

1.3. ILSAC classification of motor oils for passenger cars

Japanese and American automakers have created the international classification of motor oils for passenger cars ILSAC (International Lubricants Standardization and Approval Committee). The main classes today are classes GF-4, GF-5, GF-6 (A/B). These classes are almost identical to the corresponding API classes: SL, SN and SP, but surpass them in energy-saving properties and, accordingly, fuel efficiency.

1.4. Gear (transmission) Oil Classification

Transmission oils are intended for the lubrication of mechanical and automatic transmissions. Unlike motor oils, they do not come into contact with the hot surfaces of the combustion chamber, do not have contact with the combustion products of the fuel, but are exposed to high contact pressure with a high shear rate in the mating surfaces.

OILS FOR MECHANICAL (MANUAL) TRANSMISSIONS

For the classification of oils for mechanical transmissions by viscosity, the SAE system is most widely used. As for motor oils, for them there is a winter and summer series of viscosities. It contains 4 winter (with the letter W) and in the latest edition of 10 summer classes (table 1.4.). The double-labeled oil is multi grade (all seasons).

Viscosity by SAE	Maximum temperature at viscosity 150000 cP, (°C) ⁽¹⁾	KV at 100 °C mm ² /c ⁽²⁾	
		Min ⁽³⁾	Max
70W	-55	3,8	
75W	-40	3,8	
80W	-20	8,5	
85W	-12	11,00	
65	-	3,8	<5,0
70	-	5,0	<6,5
75	-	6,5	<8,5
80	-	8,5	<11,0
85	-	11,0	<13,5
90	-	13,5	<18,5
110	-	18,5	<24,0
140	-	24,0	<32,5
190	-	32,5	<41,0
250	-	41,0	-

Table 1.4.
Classification of viscosity of gear oils for drive axles and gearboxes SAE J-306

(1)– ASTM D 2983

(2)– ASTM D 445

(3)– The limit must be maintained after 20 hours of testing.
CEC L-45-T-93. Method C.

Also, oils are classified according to their performance according to API classification. For modern cars, API GL-4 and GL-5 class oils are used. These classes are conventionally called "gearbox oils" - GL-4 b and "hypoid gear oils" - GL-5. The oils used in limited slip differentials - limited-slip differential (LSD) – are designated by the letters LS.

Table 1.5. **API Classification of Mechanical (manual) Transmission Oils**

Class GL	Application conditions, type of gear and composition
GL-4	Oils for gears operating in conditions of varying severity from light to heavy contain 4.0% effective extreme pressure additives. Designed for bevel and hypoid gears with small axle displacement, for gearboxes of trucks, for drive axles; for unsynchronized gearboxes of North American trucks, tractors and buses (commercial vehicles), for main and other gears of all vehicles; At the moment, they are also used for synchronized gearboxes in Europe, but the data sheet should include a note about this purpose and confirmation of compliance with the requirements of machine manufacturers. They are used in gears where contact pressures reach 2100 MPa, and sliding speeds from 1.5-3.0 to 9.0-12.0 m / s. Operating temperatures - 80-90 °C at peaks up to 150 °C.
GL-5	Oils for the most loaded gears operating in harsh conditions; contain up to 6.5% effective extreme pressure and other multifunctional additives. The main purpose is the lubrication of hypoid gears with a significant displacement of the axles. They are used as universal oils for other units of mechanical transmissions (except for gearboxes with synchronizers). Only oils with special confirmation of compliance with the requirements of machine manufacturers are used for them. They are used in gears where contact pressures exceed 2100 MPa and sliding speeds are higher than 15.0 m/s. Operating temperatures can reach 300 °C.

OILS FOR AUTOMATIC TRANSMISSIONS

A special kind of oil. They are subject to higher requirements for viscosity, frictional, anti wear and antioxidant properties than for other aggregates. Since automatic transmissions include several completely dissimilar units – a torque converter, a gear transmission box, a complex control system - the spectrum of oil functions is very wide and contradictory. The oil lubricates, cools, transmits torque and provides friction clutch.

The main ones for automatic transmissions are two types of oils that meet the requirements of two major car manufacturers – General Motors and Ford, bearing the brand names DEXRON and MERCON. Varieties and stages of development of the oils of these automakers are shown in tables 1.6. and 1.7.

Table 1.6. **Varieties and stages of development of oils for automatic transmissions "GM"**

License Number	DEXRON II D (min) GM 6137-M 1978 D...	DEXRON II E (synt) GM 6137-M 1990 E...	DEXRON III GM 6297-M 1993 F...	DEXRON III GM 6417-M 1998 G...	DEXRON III GM 2004 H...	DEXRON VI GM 2006
Loop test	+	++	+++	+++	++++	+++++
Frictional properties	+	++	+++	+++	++++	+++++
Oxidation test	+	++	+++	+++	++++	+++++
Wear test	+	++	++	+++	+++	++++
Foaming	+	++	+++	+++	+++	+++
Low temperature viscosity	+	++	++	++	++	+++
Flash point	+	++	+++	+++	+++	+++
Compatibility with seals	+	++	++	++	+++	+++

Modification

M2C33-B

M2C33-D

M2C33-F (Type F)

SQM-2C9007A, M2C33-G (Type G)

SQM-2C9007A, M2C138-CJ (Type CJ)

ESPM-2C166-H (Type H)

Mercon

Mercon

Mercon V (M2C202B, Type B)

Table 1.7.

Varieties and stages of development of oils or automatic transmissions "FORD".

Oils for automatic gearboxes are painted (e. g. DEXRON red) to distinguish them from other oils and to detect leaks.



COOLANTS

The main operational properties of coolants are:

- high thermal conductivity;
- high boiling point;
- optimal chemical stability;
- the absence of corrosive effects on the structural materials of the radiator and engine;
- protection of parts of the cooling system from cavitation destruction;
- inertness to rubber products;
- lack of foaming at elevated temperatures.

Automotive coolants are conventionally divided into five main groups, depending on the composition of additives that provide corrosion protection for parts of the cooling system:

- **Silicate (inorganic) - G-11** according to the classification of the Volkswagen concern. As a rule, they are painted in blue, green or blue-green. Designated as: traditional coolants, conventional coolant, IAT (inorganic acid technology).

- **Carboxylate (organic) - G-12** according to the classification of the Volkswagen concern. As a rule, they are painted in red with all shades from orange to lilac. Indicated as: carboxylate coolant, OAT (organic acid technology).

- **Hybrid** which in addition to organic additives contain inorganic (silicates, nitrites or phosphates) - G-12+. As a rule, they are painted in red with all shades from orange to lilac. Designated as: hybrid coolant, HOAT (hybrid organic acid technology).

- **Lobrid (low hybrid) - G-12++**, containing more mineral components. They are painted in the same colors as carboxylate and hybrid. Designated as: lobrid coolant, SOAT (Silicon enhanced Organic Acid Technology).

- **Antifreezes of class G-13**, unlike antifreezes based on poisonous ethylene glycol base, are created on the basis of a harmless, environmentally friendly propylene glycol base. They are painted in purple or pink, but theoretically they can be painted in any color.

If a car radiator is made of copper or brass, it is better to fill in red - carboxylate antifreeze, if from aluminum - green or blue silicate. G-12++ and G-13 antifreezes will be suitable for any engines.

ACEA is the main standard for European manufacturers of engine oils for cars and trucks. On its basis, the specifications of OEM car manufacturers are developed.



ACEA-Specifications	Use	HTHS-Viscosity	Sulphate-Ash %	Phosphor in %	Sulfur in %	Low-SAPS*	Full-SAPS*	Fuel Economy
A3/B4-21	Gasoline Engines/ Diesel Engines	≥3,5 mPa.s	≥1,0 / ≤1,6				X	
A5/B5-21	Gasoline Engines/ Diesel Engines	≥ 2.9 & ≤ 3.5Pa.s	≤1,6					X
A7/B7-21	Gasoline Engines/ Diesel Engines	≥ 2.9 & ≤ 3.5Pa.s	≤1,6					X
C2-21	Gasoline Engines and Diesel Engines with exhaust gas aftertreatment system (DPF*)	≥2,9 mPa.s	≤0,8	≥0,07≤ 0,09	≤0,3			X
C3-21	Gasoline Engines and Diesel Engines with exhaust gas aftertreatment system (DPF*)	≥3,5 mPa.s	≤0,8	≥0,07≤ 0,09	≤0,3	X		
C4-21	Gasoline Engines and Diesel Engines with exhaust gas aftertreatment system (DPF*)	≥3,5 mPa.s	≤0,5	≤0,09	≤0,2	X		
C5-21	Gasoline Engines and Diesel Engines with exhaust gas aftertreatment system (DPF*)	≥2,6 & ≤2,9Pa.s	≤0,8	≥0,07; ≤0,09	≤0,3			X
C6-21	Gasoline Engines and Diesel Engines with exhaust gas aftertreatment system (DPF*)	≥2,6 & ≤2,9Pa.s	≤0,8	≥0,07; ≤0,09	≤0,3			X
E4-22	Utility vehicles and Building machines	≥3,5 mPa.s	≥2,0				X	
E8-22	Utility vehicles and Building machines with exhaust gas aftertreatment system (DPF*)	≥3,5 mPa.s	≤1,0	≤0,08	≤0,3	X		
E7-22	Utility vehicles and Building machines	≥3,5 mPa.s	≤2,0				X	
E11-22	Utility vehicles and Building machines with exhaust gas aftertreatment system (DPF*)	≥3,5 mPa.s	≤1,0	≤0,12	≤0,4	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

ENGINE OILS FOR CARS

AND TRANSPORTERS 06

7920 Hybrid SP 06

7722 Longlife 508/509 06

7918 Legend Ultra 07

7921 Legend Formula C5 07

7730 Legend 504/507 07

7919 Legend Extra 08

7922 Energy Formula LR 08

7901 Legend+Ester 08

7906 Energy Ultra JP 09

7907 Energy Combi LL 09

7908 Energy Premium 09

7715 Longlife 504/507 10

7909 Diesel TDI 10

7511 Energy 10

7720 Ceramic 11

7701 Energy Formula OP 11

7703 Energy Formula PSA 11

7706 Energy Formula RN 12

7707 Energy Formula FR 12

7917 Energy Formula C4 12

7914 Energy Formula JP 13

7709 For Toyota Lexus 13

7713 For Korean Cars 13

7903 Elite 14

7904 Diesel Turbo 14

7913 Energy Formula PD 14

7915 Extreme 15

7512 Special Plus 15

7501 Classic 15

7507 Defender 16

7504 Diesel Extra 16

7505 Molibden 16

7902 Racing+Ester 17

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