

Lubricant comparison table

Lubricant comparison table for all Wirtgen machines under consideration of normal operating conditions at ambient temperatures of -15°C to +40°C.

The lubricant comparison table compares a lubricant of a trade name with the lubricants of other trade manufacturers.

Due to the enormous quantity of lubricant manufacturers, it is not possible to include them all. For this reason, the Engineering Department decided to include the products of important suppliers that are presently available on the German market. A modification of this table could, if necessary, be carried out at a later date.

The lubricant industry is a fast-moving industry and new products are frequently penetrating the market, while others are continuously disappearing. The designations of existing products are also being frequently altered.

A complete schedule of all available lubricants, including all data, approvals (e.g. from engine and gearbox manufactures) and specific quality characteristics, is not possible due to volume reasons. The stated specifications take into consideration DIN, API and MIL standards.

These companies have been newly added to the lubricant comparison table:

LIQUI MOLY, OMV

These companies have been removed:

CASTROL, DEA, ELF, MOBIL, TRIBOL

Amalgamation of companies:

CHEVRON and TEXACO = CHEVRON TEXACO

MOBIL and ESSO/EXXON = ESSO/EXXON-MOBIL

These companies have been changed:

AGIP = ENI S.p.A.

TOTALFINA = TOTAL

Revision of specifications:

Engine oil API class CG-4 is changed to class CI-4 (for application in modern, low-emission diesel engines according to EPA Tier III and EU-97/68/EC Stage IIIa and simultaneous application of low-sulphur diesel fuel (0.05 - 0.5%), it is necessary to use an engine oil of API CI-4 specification)

(**API** = **A**merican **P**etroleum **I**nstitute) - (**ACEA** = **A**ssociation des **C**onstructeurs **E**uropean d'**A**utomobiles)

Coolant recommendations have been added to the lubricant comparison table.

The lubricant comparison table is designed to offer an initial insight when servicing Wirtgen machines. It does not overrule the recommendations of a lubricant specialist or the engine and gearbox manufacturers.

In line with increased consciousness towards environmental protection, it is imperative that old oil is correctly disposed of when carrying out service work or after an oil change.

The lubricants for special operational conditions are not included or compared in the lubricant comparison table.

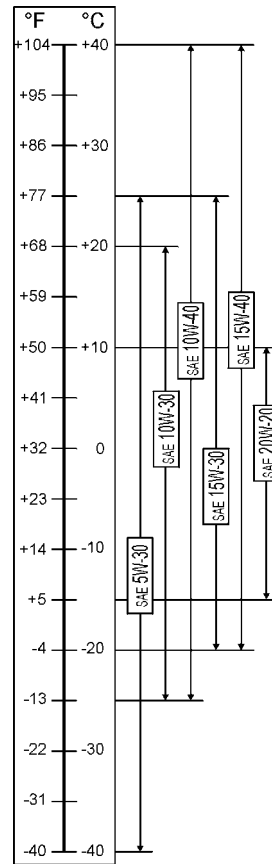
 CAUTION

Gear oil based on fully-synthetic Polyglycole cannot be mixed with mineral oils.

Biological hydraulic oils based on synthetic ester cannot be mixed with mineral oils.

Engine oil selection table

The oil viscosity grades according to SAE are selected by using the adjacent scale. The ambient temperatures are decisive when selecting the correct viscosity grade. Brief drops in temperature below the chosen limits will impair the cold starting performance but not cause engine damage. Temperatures above the chosen limits should not prevail for longer periods because of the risk of excessive wear. Multigrade oils are recommended for all-year applications.



Diesel fuel selection table

During low ambient temperatures, paraffin can be dispersed and cause clogging in the engine's fuel system. Use diesel fuel (safe to -15°C) if the ambient temperature falls below 0°C. Diesel with an additive is also available for temperatures down to approx. -20°C. If the temperature falls below -15°C or -20°C, petroleum can be added according to the adjacent table. If summer diesel fuel must be used at temperatures below 0°C, up to 50% petroleum can be added according to the adjacent table.

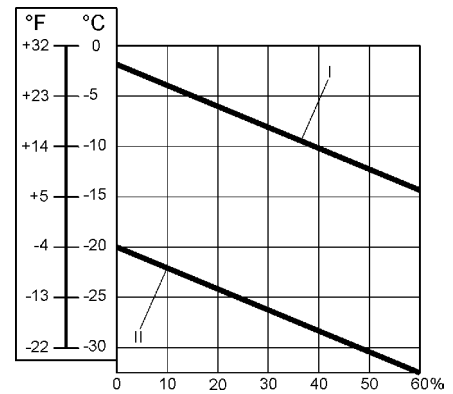
I = summer diesel fuel; II = winter diesel fuel

Requirement of diesel fuel

- Combustion point min. 55°C
- Water content max. 200 mg/kg
- Sulphur content max. 350 mg/kg
- Lubrication capability „wear scar diameter“ max 400 µm
- Cetane code for mild climates min. 49 - 51
- Cetane code for arctic climates min. 47 - 49
- Use diesel fuel according to European standard EN 590.

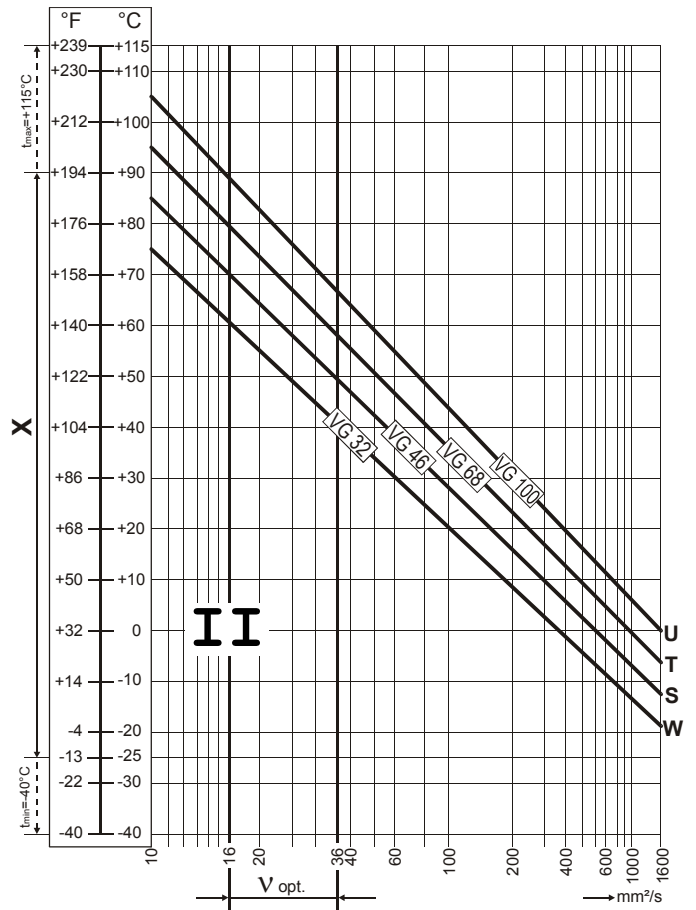
CAUTION

- The service intervals must be shortened when using diesel fuel containing a high rate of sulphur (more than 0.3 weight%).
- The original instructions of the engine manufacturer (operating, service and maintenance instructions, etc.) are to be strictly adhered to.



Hydraulic oil selection table

- W** = winter conditions in central Europe
- S** = summer conditions in central Europe or indoors
- T** = tropical conditions or highly heated rooms
- U** = high temperatures (e.g. caused by combustion engines)
- X** = pressure fluid temperature range
- v opt.** = optimum operational viscosity range
- 1000** = max. permissible viscosity (short periods)
- II** = 10mm²/s (t_{max}= +90°C) . . . 1000mm²/s (t_{min}= -25°C)



Selecting coolant anti-freeze

Coolant stipulation for whole year

50% addition of approved anti-freeze equals -37 °C frost protection.

Increased demands are placed on the coolant for diesel engines.

Coolant concentrates are approved according to Daimler Chrysler stipulations 325.2 and according to ASTM D4985.

Supplier	Coolant concentrate acc. to ASTM D4985 (WIRTGEN approved)
CATERPILLAR / ZEPPELIN	DEAC - Diesel Engine Antifreeze/Coolant
ARTECO (Joint venture ELF/TEXACO)	Havoline AFC-Antifreeze/Coolant, Havoline XLC
BP Schmierstoff GmbH	ProCool
BASF AG	Glystantin G48, Glystantin G30
SHELL	Glycoshell
ARAL Lubricants GmbH	Antifreeze Silikatfrei
HÄRTOL Chemie GmbH	Frostox SF-D12
EXXON MOBIL	Mobil Antifreeze LL2000
TOTAL	GLACELF Plus / GLACELF Auto Supra

Different coolants are not always compatible. Different additive technologies can influence or impair each other so that the cooling function could be drastically reduced. Damages caused by incompatible mixing or incorrect use of coolants are not covered by warranty agreements. The water for the production of coolants should be distilled or fully desalinated.

LUBRICANT APPLICATION

Application	Specification	WIRTGEN No. - Packaging - Size			Standard filling	Application
Engine oils	SAE 15W-40 (10W-40) API-CI-4 MB 228.3	# 34241 # 34247 # 133658	Bucket Barrel Container	20 l 200 l 1000 l	TOTAL Kappa Uni 10W-40 API CI-4	Standard diesel engines
Special engine oils	SAE 5W-30 (5W-40) API-CG-4 (CI-4)	# 69436 # 167005	Barrel Container	200 l 1000 l	MOBIL Delvac 1 5W-40 API CI-4	Diesel engines with extreme low ambient temperatures / Winter half year - 08.21 (W 2200)
Standard gear oils	SAE 85W-90 API GL 5 with EP-additives	# 10011 # 34856	Bucket Barrel	20 l 200 l	TEXACO Geartex EP-B 85W-90 API GL 5	Standard gearboxes
Special synthetic gear oils	SAE 75W-90 API GL 5	# 166382	Barrel	200 l	BP Energear SHX 75W-90 API GL 5	Extreme low ambient temperatures -15 to -30°C
Standard synthetic gear oils	Synthetic polyglycole gear oil DIN 51502 PGLP 150	# 176381 # 176380	Bucket Barrel	20 l 200 l	FUCHS Renolin PG 150	FCS gearboxes Large Milling Machines 03.WR (WR 2000)
Standard synthetic gear oils	Synthetic polyglycole gear oil DIN 51502 PGLP 220	# 71769 # 37608	Bucket Barrel	20 l 200 l	FUCHS Renolin PG 220	Milling drum gearboxes
Special synthetic gear oils	Synthetic polyglycole gear oil DIN 51502 PGLP 460	# 39315 # 48345	Bucket Barrel	20 l 200 l	FUCHS Renolin PG 460	Milling drum gearboxes with high external thermal load 02.RX (Remixer 4500)
Special industrial gear oils	Gear oil CLP 220 DIN 51517 part 3 ISO-VG 220	# 13671	Barrel	200 l	TEXACO Meropa 220	Alternative for gearbox oil SAE 85 W-90
Special industrial gear oils	Gear oil CLP 320 DIN 51517 part 3 ISO-VG 320	# 10012 # 34858	Bucket Barrel	20 l 200 l	TEXACO Meropa 320	Angular gearboxes 02.10 (1000 C/A)
Special hydraulic oils	Hydraulic oil type HVLP acc. to DIN 51524 part 3 with EP-additives ISO-VG 32	# 58497	Barrel	200 l	TEXACO Rando HDZ 32	Extreme low ambient temperatures -15 to -25°C
Standard hydraulic oils	Hydraulic oil type HVLP acc. to DIN 51524 part 3 with EP-additives ISO-VG 46	# 144865 # 21951 # 143380	Bucket Barrel	20 l 200 l	TEXACO Rando HDZ 46	All machines without hydrostatic driven milling drum
Standard hydraulic oils	Hydraulic oil type HVLP acc. to DIN 51524 part 3 with EP-additives ISO-VG 68	# 34861 # 34860 # 10349	Bucket Barrel Container	20 l 200 l 1000 l	TEXACO Rando HDZ 68	All machines with hydrostatic driven milling drum
Special hydraulic oils	Hydraulic oil type HVLP acc. to DIN 51524 part 3 with EP-additives ISO-VG 100	# 44641	Barrel	200 l	TEXACO Rando HDZ 100	High ambient temperatures 04.26 (Sohlenfräse)
Special biolog. hydraulic oils	Biolog. hydraulic oil type HVLP HEES (VDMA 24568) with EP-additives ISO-VG 46	# 144866 # 75180	Bucket Barrel	20 l 200 l	BECEM Hydrostar HEP 46	Variation for standard hydraulic oil
Special biolog. hydraulic oils	Biolog. hydraulic oil type HVLP HEES (VDMA 24568) with EP-additives ISO-VG 68	# 144867 # 68402	Bucket Barrel	20 l 200 l	PANOLIN HLP Synth 68	Variation for standard hydraulic oil
Standard grease	NLGI class 2 KPF 2 K - DIN 51825 with EP-additives	# 32110 # 11084 # 10008	Cartridge Bucket Bucket	400 g 10 kg 50 kg	FUCHS Renolin FLM 2	All machines
Special grease	NLGI class 3 KP 3 P-20 DIN 51825	# 47259 # 12628	Cartridge Bucket	400 g 50 kg	ESSO Unirex N 3	Clutches 02.RX (Remixer 4500)
Flow grease	Flow grease based on mineral oil with EP-additives (lithium based) KP/GP 00-30 DIN 51502	# 135588	Bucket	25 kg	FUCHS Duraplex EP 00	02.MS (KMA 150) 04.MS (KMA 200)
Heat transmission oils	Heat transmission oil for forced-circuit units up to 320°C DIN 51522-Q ISO-VG 22 (32)	# 20457	Barrel	200 l	TEXACO Texatherm HT 22	Heat exchanger 02.RX (Remixer 4500)

Application	Specification	HVBI- abbreviation. **	ADDINOL (1)	ENI S.p.A. (2)	ARAL (3)	AVIA (4)	BP (5)
Engine oils	SAE 15W-40 (10W-40) API-CI-4 MB 228.3	NRS	Diesel Longlife MD 1047 10W-40	SIGMA Truck 15W-40	----	----	----
Special engine oils	SAE 5W-30 (5W-40) API-CG-4 (CI-4)	NRS	----	SIGMA Trucksint TFE 5W-30	----	Turbo CFE PD 5W-40	Vanellus C8 Ultima 5W-30
Standard gear oils	SAE 85W-90 API GL 5 with EP-additives	GO 90	Getriebeöl GH 85W-90	ROTRA MP DB 85W-90	Getriebeöl Hyp 85 W-90	Hypoid 90 EP	Energear Hypo 85W-90
Special synthetic gear oils	SAE 75W-90 API GL 5		Getriebeöl GH 75W-90	----	Getriebeöl Hyp Synth 75W-90	Syntogear FE 75W/90 EP	Energear SHX 75W-90
Standard synthetic gear oils	Synthetic polyglycole gear oil DIN 51502 PGLP 150	NRS	Schmieröl RS 150 A	BLASIA S 150	DEGOL GS 150	Gear VSG 150	----
Standard synthetic gear oils	Synthetic polyglycole gear oil DIN 51502 PGLP 220	NRS	Schmieröl RS 220 A	BLASIA S 220	DEGOL GS 220	Gear VSG 220	Energear SG-XP 220
Special synthetic gear oils	Synthetic polyglycole gear oil DIN 51502 PGLP 460	NRS	Schmieröl RS 460 A	BLASIA S 460	DEGOL GS 460	Gear VSG 460	Energear SG-XP 460
Special industrial gear oils	Gear oil CLP 220 DIN 51517 part 3 ISO-VG 220	NRS	Industrie getriebeöl CLP 220	BLASIA 220	DEGOL BG 220	Gear RSX 220	Energear GR-XP 220
Special industrial gear oils	Gear oil CLP 320 DIN 51517 part 3 ISO-VG 320	NRS	Industrie Getriebeöl CLP 320	BLASIA 320	DEGOL BG 320	Gear RSX 320	Energear GR-XP 320
Special hydraulic oils	Hydraulic oil type HVLP acc. to DIN 51524 part 3 with EP-additives ISO-VG 32	HYD 0520	Hydrauliköl HVLP 32	ARNICA HVLP 32	VITAM HF 32	Fluid HVI 32	Bartran HV 32
Standard hydraulic oils	Hydraulic oil type HVLP acc. to DIN 51524 part 3 with EP-additives ISO-VG 46	HYD 0530	Hydrauliköl HVLP 46	ARNICA HVLP 46	VITAM HF 46	Fluid HVI 46	Bartran HV 46
Standard hydraulic oils	Hydraulic oil type HVLP acc. to DIN 51524 part 3 with EP-additives ISO-VG 68	HYD 1030	Hydrauliköl HVLP 68	ARNICA HVLP 68	VITAM VF 68	Fluid HVI 68	Bartran HV 68
Special hydraulic oils	Hydraulic oil type HVLP acc. to DIN 51524 part 3 with EP-additives ISO-VG 100	HYD 1040	----	ARNICA HVLP 100	----	----	Bartran HV 100
Special biolog. hydraulic oils	Biolog. hydraulic oil type HVLP HEES (VDMA 24568) with EP-additives ISO-VG 46	BIO-E- HYD 0530	Ökosynth super HEES 46S	ARNICA Extra plus S 46	FORBEX SE 46	Syntofluid F 46	Biohyd SE-S 46
Special biolog. hydraulic oils	Biolog. hydraulic oil type HVLP HEES (VDMA 24568) with EP-additives ISO-VG 68	BIO-E- HYD 1030	----	ARNICA S 68	----	Syntofluid N 68	Biohyd SE-S 68
Standard grease	NLGI class 2 KPF 2 K - DIN 51825 with EP-additives	MPG-A	Mehrzweckfett L 2 MO	AGIP GR SM	ARALUB HLPF 2	----	----
Special grease	NLGI class 3 KP 3 P-20 DIN 51825	MPG-C	----	----	----	----	----
Flow grease	Flow grease based on mineral oil with EP-additives (lithium based) KP/GP 00-30 DIN 51502		----	AGIP GR MU EP 00	Fliessfett N GP 00 K-40	Avialith 00 EP	Energear LS-EP 00
Heat transmission oils	Heat transmission oil for forced-circuit units up to 320°C DIN 51522-Q ISO-VG 22 (32)	NRS	Wärme- trägeröl XW 15	Alaria 3	FAROLIN U	Thermofluid B	Transkal N

** HVBI abbreviations by the Hauptverband der Deutschen Bauindustrie e.V. (Principal Association of German Construction Industry) for "standard lubricants" for construction machinery and vehicles

*** not mixable with mineral oil

Application	Specification	HVBI- abbreviation. **	BECEM (6)	CAT (7)	ESSO/ EXXON-MOBIL (8)	FUCHS (9)	KLÜBER (10)
Engine oils	SAE 15W-40 (10W-40) API-CI-4 MB 228.3	NRS	Staroil Super HDP Plus 15 W-40	Deo 15 W-40	Essolube XT 5 15 W-40	Titan Unic Ultra MC 10W-40	----
Special engine oils	SAE 5W-30 (5W-40) API-CG-4 (CI-4)	NRS	----	----	Mobil Delvac 1 5W-40	----	----
Standard gear oils	SAE 85W-90 API GL 5 with EP-additives	GO 90	Hypoid Getriebe SAE 90	Gearoil 80W-90	Essogear Oil GX 80W-90	Renogear Hypoid 90 85W-90	----
Special synthetic gear oils	SAE 75W-90 API GL 5		----	----	Essogear Oil TDL 75W-90	----	----
Standard synthetic gear oils	Synthetic polyglycole gear oil DIN 51502 PGLP 150	NRS	----	----	Mobil Glygole HE 150	Renolin PG 150	Klüber Synth GH 6 - 150
Standard synthetic gear oils	Synthetic polyglycole gear oil DIN 51502 PGLP 220	NRS	Berusrynth EP 220	----	Mobil Glygole HE 220	Renolin PG 220	Klüber Synth GH 6 - 220
Special synthetic gear oils	Synthetic polyglycole gear oil DIN 51502 PGLP 460	NRS	Berusrynth EP 460	----	Mobil Glygole HE 460	Renolin PG 460	Klüber Synth GH 6 - 460
Special industrial gear oils	Gear oil CLP 220 DIN 51517 part 3 ISO-VG 220	NRS	Staroil G ISO-VG 220	----	Esso Spartan EP 220	Renolin CLP 220	Klüberoil GEM 1 - 220
Special industrial gear oils	Gear oil CLP 320 DIN 51517 part 3 ISO-VG 320	NRS	Staroil G ISO-VG 320	----	Esso Spartan EP 320	Renolin CLP 320	Klüberoil GEM 1 - 320
Special hydraulic oils	Hydraulic oil type HVLP acc. to DIN 51524 part 3 with EP-additives ISO-VG 32	HYD 0520	----	----	Esso Univis N 32	Renolin B 32 HVI	Lamora HLP 32
Standard hydraulic oils	Hydraulic oil type HVLP acc. to DIN 51524 part 3 with EP-additives ISO-VG 46	HYD 0530	Staroil HVI 46	Hydo ISO-VG 46	Esso Univis N 46	Renolin B 46 HVI	Lamora HLP 46
Standard hydraulic oils	Hydraulic oil type HVLP acc. to DIN 51524 part 3 with EP-additives ISO-VG 68	HYD 1030	----	----	Esso Univis N 68	Renolin B 68 HVI	Lamora HLP 68
Special hydraulic oils	Hydraulic oil type HVLP acc. to DIN 51524 part 3 with EP-additives ISO-VG 100	HYD 1040	----	----	Esso Univis N 100	----	----
Special biolog. hydraulic oils	Biolog. hydraulic oil type HVLP HEES (VDMA 24568) with EP-additives ISO-VG 46	BIO-E- HYD 0530	Hydrostar HEP 46	Bio-Hydr.oil HEES ISO-VG 46	Mobil EAL Syndraulik 46	Plantosyn 3268 ECO ISO-VG 46	----
Special biolog. hydraulic oils	Biolog. hydraulic oil type HVLP HEES (VDMA 24568) with EP-additives ISO-VG 68	BIO-E- HYD 1030	Hydrostar HEP 68	----	----	Plantosyn 3268 ECO ISO-VG 68	----
Standard grease	NLGI class 2 KPF 2 K - DIN 51825 with EP-additives	MPG-A	High-Lub KLF 2K	----	Esso MP Grease Moly	Renolit FLM 2	Unimoly GL 82
Special grease	NLGI class 3 KP 3 P-20 DIN 51825	MPG-C	----	----	Esso Unirex N 3	----	----
Flow grease	Flow grease based on mineral oil with EP-additives (lithium based) KP/GP 00-30 DIN 51502		Rhus LIC 00	----	Esso Grease TCL 435	Durplex EP 00	----
Heat transmission oils	Heat transmission oil for forced-circuit units up to 320°C DIN 51522-Q ISO-VG 22 (32)	NRS	Therm B ISO-VG 32	----	Essotherm 650	Renolin Therm 330 S	Nicalor 302

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Application	Specification	HVBI- abbreviation. **	LIQUI MOLY (11)	O M V (12)	PANOLIN (13)	Q 8 (14)	SHELL (15)
Engine oils	SAE 15W-40 (10W-40) API-CI-4 MB 228.3	NRS	Leichtlauf Motoröl 10W-40 Basic	truck LD 15W-40	Universal VO 15W-40	T 750 15W-40	Rimula Super 15W-40
Special engine oils	SAE 5W-30 (5W-40) API-CG-4 (CI-4)	NRS	----	super truck 5W-30	Diesel HTE 5W-30	Super Truck FE 5W-30	Rimula Ultra 5W-30
Standard gear oils	SAE 85W-90 API GL 5 with EP-additives	GO 90	Hypoid Getriebeöl SAE 85W-90	gear oil B 85W-90	Super Duty SAE 90	T 55 SAE 90	Spirax MB 90 SAE 90
Special synthetic gear oils	SAE 75W-90 API GL 5		Synthetisches Getriebeöl SAE 75W-90	gear oil BSX 75W-90	Super Duty Synth 75W-90	T 65 75W-90	Spirax ASX 75W-90
Standard synthetic gear oils	Synthetic polyglycole gear oil DIN 51502 PGLP 150	NRS	----	----	Synthgear 150	Gade 150	Tivela S 150
Standard synthetic gear oils	Synthetic polyglycole gear oil DIN 51502 PGLP 220	NRS	----	gear oil PG 220	Synthgear 220	Gade 220	Tivela S 220
Special synthetic gear oils	Synthetic polyglycole gear oil DIN 51502 PGLP 460	NRS	----	gear oil PG 460	Synthgear 460	Gade 460	Tivela S 460
Special industrial gear oils	Gear oil CLP 220 DIN 51517 part 3 ISO-VG 220	NRS	Getriebeöl CLP 220	gear oil HST 220	Mecano ISO 220	Goya 220	Omala 220
Special industrial gear oils	Gear oil CLP 320 DIN 51517 part 3 ISO-VG 320	NRS	Getriebeöl CLP 320	gear oil HST 320	Mecano ISO 320	Goya 320	Omala 320
Special hydraulic oils	Hydraulic oil type HVLP acc. to DIN 51524 part 3 with EP-additives ISO-VG 32	HYD 0520	Hydrauliköl HVLP 32	hyd oil HLP-M 32	HLP Uni 32	Händel 32	Tellus T 32
Standard hydraulic oils	Hydraulic oil type HVLP acc. to DIN 51524 part 3 with EP-additives ISO-VG 46	HYD 0530	Hydrauliköl HVLP 46	hyd oil HLP-M 46	HLP Uni 46	Händel 46	Tellus T 46
Standard hydraulic oils	Hydraulic oil type HVLP acc. to DIN 51524 part 3 with EP-additives ISO-VG 68	HYD 1030	Hydrauliköl HVLP 68	hyd oil HLP-M 68	HLP Uni 68	Händel 68	Tellus T 68
Special hydraulic oils	Hydraulic oil type HVLP acc. to DIN 51524 part 3 with EP-additives ISO-VG 100	HYD 1040	----	----	HLP Uni 100	----	Tellus T 100
Special biolog. hydraulic oils	Biolog. hydraulic oil type HVLP HEES (VDMA 24568) with EP-additives ISO-VG 46	BIO-E- HYD 0530	Hydrauliköl HEES 46	biohyd oil MS 46	----	Holbein 46	Naturelle HF-E 46
Special biolog. hydraulic oils	Biolog. hydraulic oil type HVLP HEES (VDMA 24568) with EP-additives ISO-VG 68	BIO-E- HYD 1030	----	biohyd oil MS 68	HLP Synth 68	----	Naturelle HF-E 68
Standard grease	NLGI class 2 KPF 2 K - DIN 51825 with EP-additives	MPG-A	LM 47 MoS2 Langzeitfett	signum LM	Molygrease 23	Rembrandt Moly	Retinax HDX 2
Special grease	NLGI class 3 KP 3 P-20 DIN 51825	MPG-C	----	----	----	----	Alvania RL 3
Flow grease	Flow grease based on mineral oil with EP-additives (lithium based) KP/GP 00-30 DIN 51502		----	lithplex EP00	Grease 00	Rembrandt EP 00	Alvania GL 00
Heat transmission oils	Heat transmission oil for forced-circuit units up to 320°C DIN 51522-Q ISO-VG 22 (32)	NRS	----	thermo HT	MT-Oil 22	Gluck M	Therma B

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Application	Specification	HVBI- abbreviation. **	STATOIL (16)	CHEVRON TEXACO (17)	TOTAL (18)
Engine oils	SAE 15W-40 (10W-40) API-CI-4 MB 228.3	NRS	Max Way 10W-40	CHEVRON Delo 400 Multigrade	Rubia TIR 7400 15W-40
Special engine oils	SAE 5W-30 (5W-40) API-CG-4 (CI-4)	NRS	Truck Way 5W-30	Ursa Premium FE 5W-30	Rubia TIR 9200 FE 5W-30
Standard gear oils	SAE 85W-90 API GL 5 with EP-additives	GO 90	Gear Way G5 85W-90	GearTex EP-B 85W-90	Total EP B 85W-90
Special synthetic gear oils	SAE 75W-90 API GL 5		Syntol 75W-90	----	Transmission BM 75W-90
Standard synthetic gear oils	Synthetic polyglycole gear oil DIN 51502 PGLP 150	NRS	Load Way PG 150	Synlube CLP 150	----
Standard synthetic gear oils	Synthetic polyglycole gear oil DIN 51502 PGLP 220	NRS	Load Way PG 220	Synlube CLP 220	Carter SY 220
Special synthetic gear oils	Synthetic polyglycole gear oil DIN 51502 PGLP 460	NRS	Load Way PG 460	Synlube CLP 460	Carter SY 460
Special industrial gear oils	Gear oil CLP 220 DIN 51517 part 3 ISO-VG 220	NRS	Load Way EP 220	Meropa 220	Carter EP 220
Special industrial gear oils	Gear oil CLP 320 DIN 51517 part 3 ISO-VG 320	NRS	Load Way EP 320	Meropa 320	Carter EP 320
Special hydraulic oils	Hydraulic oil type HVLP acc. to DIN 51524 part 3 with EP-additives ISO-VG 32	HYD 0520	Hydra Way HVXA 32	Rando HDZ 32	Equivis ZS 32
Standard hydraulic oils	Hydraulic oil type HVLP acc. to DIN 51524 part 3 with EP-additives ISO-VG 46	HYD 0530	Hydra Way HVXA 46	Rando HDZ 46	Equivis ZS 46
Standard hydraulic oils	Hydraulic oil type HVLP acc. to DIN 51524 part 3 with EP-additives ISO-VG 68	HYD 1030	Hydra Way HVXA 68	Rando HDZ 68	Equivis ZS 68
Special hydraulic oils	Hydraulic oil type HVLP acc. to DIN 51524 part 3 with EP-additives ISO-VG 100	HYD 1040	Hydra Way HVXA 100	Rando HDZ 100	Equivis ZS 100
Special biolog. hydraulic oils	Biolog. hydraulic oil type HVLP HEES (VDMA 24568) with EP-additives ISO-VG 46	BIO-E- HYD 0530	Hydra Way Bio SE 46	Synstar Hydraulic HT 46	Biohydran TMP 46
Special biolog. hydraulic oils	Biolog. hydraulic oil type HVLP HEES (VDMA 24568) with EP-additives ISO-VG 68	BIO-E- HYD 1030	Hydra Way Bio SE 68	Synstar Hydraulic HT 68	Biohydran TMP 68
Standard grease	NLGI class 2 KPF 2 K - DIN 51825 with EP-additives	MPG-A	Uni Way LIX 625	Molytex EP 2	Multis MS 2
Special grease	NLGI class 3 KP 3 P-20 DIN 51825	MPG-C	----	----	Ceran WR 2
Flow grease	Flow grease based on mineral oil with EP-additives (lithium based) KP/GP 00-30 DIN 51502		Grease Way LIX 400	----	Multis EP 00
Heat transmission oils	Heat transmission oil for forced-circuit units up to 320°C DIN 51522-Q ISO-VG 22 (32)	NRS	Term Way	Texatherm HT 22	Seriola 1510

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