



Industrial Technology

Axles for construction machinery

List of lubricants TE-ML 05

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The list of lubricants TE-ML 05, **edition 01.01.2024** replaces all previous editions. The current list can be requested from any ZF after-sales service center or accessed on the Internet under www.aftermarket.zf.com/lubricants.

ZF Friedrichshafen AG
D-88038 Friedrichshafen
www.zf.com/contact

1. Current products

Product groups	Series	Lubricant classes for service fills ⁽¹⁾
Compactor	MT-C 3035, MT-C 3065, MT-C 3075	ZF PowerFluid Gear LS 05C / 05N
Motor grader	MT-G 3070, MT-G 3075, MT-G 3080, MT-G 3085, MT-G 3090, WH-L3065, WH-L3075	ZF PowerFluid Plus 05E / 05F / 05G
Dumper	Axle/Wheel head: MT-D 3105	ZF PowerFluid Gear LS ZF PowerFluid Plus 05C / 05E / 05F / 05G / 05N
	Brake: MT-D 3105, WH-D 3105	ZF PowerFluid Plus 05E / 05F / 05G
	Axle inserts	ZF PowerFluid Gear LS ZF PowerFluid Plus 05C / 05E / 05F / 05G / 05N
	MT-D 3085 II, MT-D 3095 II	ZF PowerFluid Plus 05E / 05F / 05G
Wheel loader	MT-L 3065, MT-L 3075, MT-L 3085, MT-L 3095, MT-L 3105, MT-L 3110, MT-L 3115, MT-L 3125, MT-L 3135 AP-410, AP-412, AP-L 3085, AP-L 3095	ZF PowerFluid Gear LS ZF PowerFluid Plus 05C / 05E / 05F / 05G / 05N
Backhoe loader	Rear axle: MT-B 3065, MT-B 3070, MT-2075, MT-2085	ZF PowerFluid Plus 05E / 05F / 05G
	Front axle: MS-B 3025, MS-2045, MS-B 3035	ZF PowerFluid Gear LS ZF PowerFluid Plus 05C / 05E / 05F / 05G / 05N
Telescopic handler	MS-T 3045, MS-T 3055, MS-T 3060	ZF PowerFluid Plus 05E / 05F / 05G
Compact loader	AV230	ZF PowerFluid Gear LS 05A / 05C / 05N
	MT-L 3010, MT-L 3015, MT-L 3020, MT-L 3025, MT-L 3045, MT-L 3055 MS-L 3015	ZF PowerFluid Gear LS ZF PowerFluid Plus 05C / 05E / 05F / 05G / 05N
	MT-L 3010, MT-L 3015, MT-L 3020, MT-L 3025, MT-L 3045, MT-L 3055	ZF PowerFluid Plus 05E / 05F / 05G
Compact loader with electric drive	MT-L 3010, MT-L 3015, MT-L 3020, MT-L 3025, MT-L 3045, MT-L 3055	ZF PowerFluid Plus 05E / 05F / 05G
Mobile excavator	MS-E 3050, MT-E 3050, MS-E 3060, MT-E 3060, MS-E 3070, MT-E 3070	ZF PowerFluid Gear LS ZF PowerFluid Plus 05C / 05E / 05F / 05G / 05N The TE-ML 07 must be observed for directly fitted HL transmissions.

2. Products not listed in detail

Product groups	Lubricant classes for service fills ⁽¹⁾	
	without	with
	wet multi-disc brakes and / or multi-disc limited-slip differentials	
Axles Differentials Axle inserts Wheel hubs	ZF PowerFluid Gear LS ZF PowerFluid Plus 05A / 05C / 05N 05E / 05F / 05G	ZF PowerFluid Gear LS ZF PowerFluid Plus 05C / 05E / 05F / 05G / 05N
Axles, differentials and axle inserts with hypoid drive	ZF PowerFluid Gear LS 05A / 05C / 05N	ZF PowerFluid Gear LS 05C / 05N

Note: APL 9000 see TE-ML 12

3. Hydraulic fluids

Product group	Lubricant classes for service fills ⁽¹⁾	Use at outside temperatures
Brake hydraulics, hydraulic differential lock (DHL) and steering	05L	- 40°C
	lubricants in accordance with JDM J20D	- 40°C
	05E / 05F (only lubricants in accordance with JDM J20C), 05G	- 30°C
	05K	- 30°C
	05M (ISO VG 32)	- 40°C
	05M (ISO VG 46)	- 10°C
	05M (ISO VG 68)	- 5°C

4. Greasing points

Product groups	Lubricating grease
Swivel bearing axles, motor grader: MT-G 3070, MT-G 3075, MT-G 3080, MT-G 3085, MT-G 3090	Total Aerogrease N 31089 Shell Aeroshell Grease 22 Lubricating interval acc. to corresponding lubricating and maintenance specifications
Other	Lithium saponified multipurpose grease of NLGI class 2 which is mixable with mineral oil (grease code KP2K-30 in acc. with DIN 51825 or ISO-L-XCCHB2 in accordance with ISO 6743-9). Lubricating interval acc. to corresponding lubricating and maintenance specifications.

5. Oil change intervals

5.1 Initial oil change intervals

Lubricant class	ZF filling ex works
Load class	Oil change intervals
1	2000 h ⁽²⁾
2	1500 h ⁽²⁾
3	1000 h ⁽²⁾

Note: The original ZF factory fill is to remain in the axle for at least the first 500 operating hours; it is not recommended to change the oil earlier.

5.2 Subsequent oil change intervals

Lubricant class	05A	ZF PowerFluid Gear LS 05C / 05F / 05N	ZF PowerFluid Plus 05E / 05G
Load class	Oil change intervals		
1	1500 h	2000 h	4000 h
2	1000 h	1500 h	3000 h
3	500 h	1000 h	2000 h

6. Load classes

Load class	Examples of applications
1	- Mobile excavator with low driving-mode share (<25%) and equipment in material handling - Wheel loader and Dumper with low share of service brake use - Other axles without wet brakes
2	- Mobile excavator with increased driving-mode share (>25%) and equipment in timber handling - Wheel loader, grader, telescopic handler, Dumper - Backhoe loader under normal operating conditions - Compactors
3	- Wheel loader and Dumper operated under extreme braking conditions - Backhoe loader under extreme operating conditions - Generally all vehicles operated in outdoor temperatures > 40°C

7. Explanation of footnotes and comments

Footnotes

- (1) Refer to the following pages for approved commercial products.
For information on oil change intervals, refer to Section 5.
- (2) The original ZF factory fill is to remain in the axle for at least the first 500 operating hours; it is not recommended to change the oil earlier.

Comments

Additives of any kind added **later** to the oil change the oil in a manner that is unpredictable, and they are therefore not permitted. No liability of any kind will be accepted by ZF for any damage resulting from the use of such additives.

8. Lubricant classes and approved trade products**Lubricant class 05A**

Gear oil

Viscosity grades: SAE 75W-90 / 75W-110 / 75W-140 / 80W-90 / 85W-90 / 90

Manufacturer (05A)**Trade name (05A)****ZF approval number**

ADDINOL LUBE OIL GMBH, LEUNA/DE	ADDINOL GETRIEBEÖL GX 80W-90 ML	ZF000672
ADDINOL LUBE OIL GMBH, LEUNA/DE	ADDINOL GETRIEBEÖL GH 75 W 90 SL	ZF002260
ADDINOL LUBE OIL GMBH, LEUNA/DE	ADDINOL GETRIEBEÖL GH 85 W 140	ZF003561
ADDINOL LUBE OIL GMBH, LEUNA/DE	ADDINOL GETRIEBEÖL GX 80 W 90	ZF003620
AVISTA OIL DEUTSCHLAND GMBH, UETZE/DE	AVISTA PEER EVO GL4/GL5 SAE 80W-90	ZF004780
AVISTA OIL DEUTSCHLAND GMBH, UETZE/DE	AVISTA PEER EVO PRIME GL4/GL5 SAE 80W-90	ZF004797
BAHRAIN PETROLEUM COMPANY, AWALI/BH	SPAREX EP 90 GL-5	ZF002316
BAHRAIN PETROLEUM COMPANY, AWALI/BH	SPAREX EP 80W-90 GL-5	ZF002317
BAHRAIN PETROLEUM COMPANY, AWALI/BH	SPAREX EP 85W-140 GL-5	ZF002318
BASF SE, LUDWIGSHAFEN/DE	EMGARD HP 75W-90	ZF001716
BAYWA AG MÜNCHEN, MÜNCHEN/DE	TECTROL MULTIGEAR PLUS 8090	ZF001160
BELGIN MADENI YAGLAR TIC. VE SAN. A.S., KOCAELI/TR	BELGIN LUBEX MITRAS AX SYN ULTRA 75W-90	ZF005978
BELGIN MADENI YAGLAR TIC. VE SAN. A.S., KOCAELI/TR	BELGIN LUBEX MITRAS AX EP MD 80W-90	ZF006035
BLASER SWISSLUBE AG, HASLE-RÜEGSAU/CH	EVOLCA SGP 75W90	ZF004734
BLASER SWISSLUBE AG, HASLE-RÜEGSAU/CH	EVOLCA BGP 80W90	ZF004735
CASTROL LTD, LONDON/GB	CASTROL AXLE LONG DRAIN 80W-90	ZF000229
CASTROL LTD, LONDON/GB	CASTROL AXLE EPX 85W-140	ZF000910
CASTROL LTD, LONDON/GB	CASTROL AXLE EPX 80W-90	ZF001320
CASTROL LTD, LONDON/GB	CASTROL AXLE EPX 80W-90	ZF001754
CASTROL LTD, LONDON/GB	CASTROL TRANSMAX AXLE LONG LIFE 75W-90	ZF002142
CASTROL LTD, LONDON/GB	CASTROL TRANSMAX UNIVERSAL LL 80W-90	ZF002143
CASTROL LTD, LONDON/GB	CASTROL TRANSMAX UNIVERSAL LL 75W-90	ZF002144
CASTROL LTD, LONDON/GB	CASTROL TRANSMAX AXLE EPX 80W-90	ZF002163
CASTROL LTD, LONDON/GB	CASTROL AXLE EPX 80W-90	ZF004752
CASTROL LTD, LONDON/GB	CASTROL TRANSMAX AXLE LONG DRAIN 80W-90	ZF004885
CASTROL LTD, LONDON/GB	CASTROL SAF-XO 75W-90	ZF006097
CEPSA COMERCIAL PETRÓLEO S.A.U., MADRID/ES	CEPSA TRANSMISIONES EP 80W-90	ZF000084
CEPSA COMERCIAL PETRÓLEO S.A.U., MADRID/ES	CEPSA TRANSMISIONES EP 85W-140	ZF000085
CEPSA COMERCIAL PETRÓLEO S.A.U., MADRID/ES	CEPSA TRANSMISIONES EP FE+LD 75W-90	ZF000086
CEPSA COMERCIAL PETRÓLEO S.A.U., MADRID/ES	MAN SUPER AXLE 3343 75W-90	ZF000965
CEPSA COMERCIAL PETRÓLEO S.A.U., MADRID/ES	MAN SUPER AXLE 342-M2	ZF000966
CHAMPION CHEMICALS N.V., HEMIKSEM/BE	CHAMPION OEM SPECIFIC 75W90 GL 5	ZF003554
CHEVRON LUBRICANTS, SAN RAMON, CA/US	MULTIGEAR PREMIUM EP SAE 85W-140	ZF001196
CHEVRON LUBRICANTS, SAN RAMON, CA/US	MULTIGEAR EP-5 SAE 80W-90	ZF002137
CHEVRON LUBRICANTS, SAN RAMON, CA/US	DELO GEAR EP-5 SAE 85W-140	ZF002254
CHEVRON LUBRICANTS, SAN RAMON, CA/US	DELO GEAR EP-5 SAE 80W-90	ZF002270
CHEVRON LUBRICANTS, SAN RAMON, CA/US	DELO GEAR TDL 80W-90	ZF002273
CHEVRON LUBRICANTS, SAN RAMON, CA/US	DELO SYN-GEAR XS 75W-140	ZF002274
CHEVRON LUBRICANTS, SAN RAMON, CA/US	DELO SYN-TDL 75W-90	ZF003353
CHEVRON LUBRICANTS, SAN RAMON, CA/US	DELO GEAR CGA SAE 80W-90	ZF003442
CLASS KGAA MBH, HARSEWINKEL/DE	AGRISHIFT MT 80W-90	ZF008203
CLASS KGAA MBH, HARSEWINKEL/DE	AGRISHIFT MT 80W-90	ZF008233
CONDAT LUBRIFIANTS, CHASSE SUR RHONE/FR	GEAR TXS 75W90	ZF000829
CYCLON HELLAS SA, ATHENS/GR	GEAR EP GL-5 80W-90	ZF001604
DE OLIEBRON BV, ZWIJNDRECHT/NL	TOR UNI GEAR LD 75W90	ZF000964
DEUTSCHE ÖLWERKE LUBMIN, LUBMIN/DE	AVENO TDL ULTIMATE 75W-90	ZF010792
EKO ABEE, ATHENS/GR	EKO GEAROL-5 80W-90	ZF003351
ELLIS ENTERPRISES EAST D.O.O. KRUSEVAC, KRUSEVAC/RS	MULTIHIPO 75W-90 SINT	ZF000653
ELLIS ENTERPRISES EAST D.O.O. KRUSEVAC, KRUSEVAC/RS	MULTIHIPO 80W-90 F PLUS	ZF001456
ELLIS ENTERPRISES EAST D.O.O. KRUSEVAC, KRUSEVAC/RS	MULTIHIPO 80W-140 F PLUS	ZF001749
ENI SUSTAINABLE MOBILITY S.P.A., ROME/IT	ENI ROTRA MP 80W-90	ZF000855
ENI SUSTAINABLE MOBILITY S.P.A., ROME/IT	ENI ROTRA MP 85W-140	ZF000856
ENI SUSTAINABLE MOBILITY S.P.A., ROME/IT	ENI ROTRA LSX 75W-90	ZF000860
ENI SUSTAINABLE MOBILITY S.P.A., ROME/IT	ENI ROTRA MP 75W-90	ZF003364
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILUBE 1 SHC 75W-90	ZF000041
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILUBE HD-A PLUS 80W-90	ZF000042
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILUBE S 80W-90	ZF000776
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC 1 GEAR OIL 75W-90	ZF001681
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC 1 GEAR OIL 80W-140	ZF001682
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC ULTRA TOTAL DRIVELINE 75W-90	ZF003699
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC MODERN AXLE OIL 85W-140 V1	ZF008179
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC MODERN AXLE OIL 80W-90 V1	ZF008180
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC MODERN AXLE OIL 85W-140 V1	ZF008309
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC MODERN AXLE OIL 85W-140 V1	ZF008310
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC MODERN AXLE OIL 80W-90 V1	ZF008311
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC MODERN AXLE OIL 80W-90 HDA	ZF009835
FINKE MINERALÖLWERK GMBH, 27374 VISSSELHÖVEDE/DE	AVIATICON FINKOGEAR PREMIUM 75W-90	ZF002249
FINKE MINERALÖLWERK GMBH, 27374 VISSSELHÖVEDE/DE	AVIATICON FINKOGEAR SUPER 80W-90	ZF002299
FUCHS PETROLUB SE, MANNHEIM/DE	FUCHS TITAN CYTRAC HSY SAE 75W-90	ZF000642
FUCHS PETROLUB SE, MANNHEIM/DE	FUCHS TITAN GEAR HYP LD SAE 80W-90	ZF000645
FUCHS PETROLUB SE, MANNHEIM/DE	FUCHS TITAN SUPERGEAR SAE 80W-90	ZF000647
FUCHS PETROLUB SE, MANNHEIM/DE	FUCHS TITAN SUPERGEAR SAE 85W-140	ZF000650
FUCHS PETROLUB SE, MANNHEIM/DE	FUCHS TITAN SUPERGEAR MC SAE 80W-90	ZF000722
FUCHS PETROLUB SE, MANNHEIM/DE	FUCHS TITAN CYTRAC RR SAE 75W-90	ZF000732
FUCHS PETROLUB SE, MANNHEIM/DE	GEARWAY S5 75W-90	ZF001030
FUCHS PETROLUB SE, MANNHEIM/DE	GEARWAY G5 80W-90	ZF001036
FUCHS PETROLUB SE, MANNHEIM/DE	PENTOSIN GETRIEBEÖL O-226 80W-90	ZF001195
FUCHS PETROLUB SE, MANNHEIM/DE	FUCHS TITAN CYTRAC TD SAE 75W-90	ZF003341
FUCHS PETROLUB SE, MANNHEIM/DE	FUCHS AGRIFARM GEAR SAE 80W-90	ZF003624
FUCHS PETROLUB SE, MANNHEIM/DE	PENTOSIN GEAR SAE 80W-90	ZF004809
FUCHS PETROLUB SE, MANNHEIM/DE	PENTOSIN GEAR SAE 85W-140	ZF004810

Lubricant class 05C

Gear oil with limited-slip-additives

Viscosity grades: SAE 75W-90 / 75W-110 / 75W-140 / 80W-90 / 85W-90 / 90

Manufacturer (05C)

ADDINOL LUBE OIL GMBH, LEUNA/DE
 ADDINOL LUBE OIL GMBH, LEUNA/DE
 AVIA AG, MÜNCHEN/DE
 AVISTA OIL DEUTSCHLAND GMBH, UETZE/DE
 BAYWA AG MÜNCHEN, MÜNCHEN/DE
 BELGIN MADENI YAĞLAR TIC. VE SAN. A.S., KOCAELI/TR
 BLASER SWISSLUBE AG, HASLE-RÜEGSAU/CH
 CASTROL LTD, LONDON/GB
 CASTROL LTD, LONDON/GB
 CEPSA COMERCIAL PETRÓLEO S.A.U., MADRID/ES
 CHAMPION CHEMICALS N.V., HEMIKSEM/BE
 CHEVRON LUBRICANTS, SAN RAMON, CA/US
 CHEVRON LUBRICANTS, SAN RAMON, CA/US
 CHEVRON LUBRICANTS, SAN RAMON, CA/US
 CLASS KGAA MBH, HARSEWINKEL/DE
 EXXONMOBIL CORPORATION, HOUSTON, TX/US
 FINKE MINERALÖLWERK GMBH, 27374 VISSELHÖVEDE/DE
 FUCHS PETROLUB SE, MANNHEIM/DE
 GEORG OEST MINERALÖLWERK GMBH & CO.KG, FREUDENSTADT/DE
 GS CALTEX CORPORATION, SEOUL/KR
 GULF OIL INTERNATIONAL, MUMBAI/IN
 HINDUSTAN PETROLEUM CORPORATION LTD., MUMBAI/IN
 HITACHI CONSTRUCTION MACHINERY EUROPE NV, AMSTERDAM/NL
 HUILES BERLIET S.A., SAINT-PRIEST/FR
 INA MAZIVA LTD., ZAGREB/HR
 JOHN DEERE, MOLINE, ILLINOIS/US
 KUWAIT PETROLEUM INTERNATIONAL LUBRICANT, ANTWERP/NL
 LIEBHERR HYDRAULIKBAGGER GMBH, KIRCHDORF/DE
 LIQUI MOLY GMBH, ULM/DE
 MEGUIN GMBH & CO. KG, SAARLOUIS/DE
 MOL-LUB KFT, ALMASFUZITO/HU
 MORRIS LUBRICANTS, SHREWSBURY/GB
 MOTOREX AG, LANGENTHAL/CH
 MOTOREX AG, LANGENTHAL/CH
 NILS SPA, BURGSTALL/IT
 NORTHLAND PRODUCTS COMPANY, WATERLOO, IOWA/US
 OILFINO MINERALÖL GMBH, PRISDORF/DE
 ORLEN OIL SP. Z O.O., KRAKOW/PL
 ORLEN OIL SP. Z O.O., KRAKOW/PL
 ORLEN S.A., GDANSK/PL
 OY TEBOIL AB, HELSINKI/FI
 PAKELO MOTOR OIL, SAN BONIFACIO (VR)/IT
 PETROGAL S.A., LISBOA/PT
 PETROL OFISI A.S., ISTANBUL/TR
 PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY
 PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY
 PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY
 PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY
 PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY
 PHI OIL GMBH, ST. GEORGEN/AT
 REPSOL LUBRICANTES Y ESPECIALIDADES, S.A, MADRID/ES
 REPSOL LUBRICANTES Y ESPECIALIDADES, S.A, MADRID/ES
 ROLF LUBRICANTS GMBH, LEVERKUSEN/DE
 SASOL ENERGY, JOHANNESBURG/ZA
 SAVITA OIL TECHNOLOGIES LIMITED, MUMBAI/IN
 SENNEBOGEN MASCHINENFABRIK GMBH, STEINACH/DE
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB
 SINOPEC LUBRICANT CO., LTD., BEIJING/CN
 SK ENMOVE CO.,LTD., SEOUL/KR
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
 UNIL OPAL, SAUMUR/FR
 VALVOLINE CUMMINS PVT LIMITED, GURGAON/IN
 VALVOLINE EUROPE, DORDRECHT/NL
 VALVOLINE EUROPE, DORDRECHT/NL
 WOLF OIL CORPORATION N.V., HEMIKSEM/BE
 ZF FRIEDRICHSHAFEN AG, FRIEDRICHSHAFEN/DE

Trade name (05C)

ADDINOL GETRIEBEÖL GH 85W-90 LS
 ADDINOL GETRIEBEÖL GH 80W-90 LS
 AVIA HYPOID 90 LS
 AVISTA PEER EVO GL5 LS SAE 90
 TECTROL MULTIGEAR LS 90
 BELGEAR LS 85W90
 EVOLCA BGX 85W90
 CASTROL TRANSMAX LIMITED SLIP LL 75W-140
 CASTROL TRANSMAX LIMITED SLIP Z 85W-90
 CEPSA AURIGA LS PLUS 80W-90
 CHAMPION OEM SPECIFIC 80W90 LS GL 5
 GEAR OIL ZF SAE 80W-90
 GEARTEX LS 80W-90
 GEARTEX LS 85W-90
 CLAAS AGRISHIFT BLS 90
 MOBILUBE LS 85W-90
 AVIATICON HYPOID LS 90
 FUCHS TITAN GEAR LS SAE 90
 OEST GETRIEBEÖL HYPOID LS 90
 DOOSAN LS GEAR OIL 80W90
 GULF GEAR LS 90
 HP GEAR OIL ZFL 80W 90 LS
 HITACHI GENUINE AXLE OIL ZX-W LS 80W-90
 EP 90 GL
 INA HIPENOL GTL LS 90
 JOHN DEERE GL-5 GEAR LUBRICANT W/LS ADD 80W-90
 Q8 T 45 LS SAE 90
 LIEBHERR GEAR BASIC 90 LS
 LIQUI MOLY HYPOID-GETRIEBEÖL PLUS GL 5 LS 85W-90
 MEGOL HYPOID-GETRIEBEÖL AXLE LS SAE 85W-90
 MOL HYKOMOL LS 85W90
 TERRAIN LS 80W-90
 MOTOREX YORK LS UNIVERSAL SAE 90
 YORK 699 LS SAE 90
 ALGOL HYPOID LS 90
 POSI-GRIP JDZF 80W90
 OILFINO VARIUS G 400LS 85W-90
 PLATINUM GEAR LS 80W-90
 PLATINUM AGRO LS 80W-90
 LOTOS TITANIS LS GL-5 80W-90
 TEBOIL HYPOID LS 80W-90
 UNIVERSAL GEAR EP LS SAE 85W/90
 GALP TRANSOIL HP LS 90
 MAXIGEAR EP-X 85W-90LS
 AMBRA AXF 80W-90 (SAE 80W-90)
 AKCELA AXLEPOWER (SAE 80W-90)
 TUTELA TRANSMISSION W90/LS (SAE 80W-90)
 ARBOR TTF (SAE 80W-90)
 PETRONAS AXLE 300 LS 80W-90
 SUPERGEAR BRONZE 85W90 LS
 REPSOL CARTAGO EP AUTOBLOCANTE SAE 80W90
 REPSOL NAVIGATOR LSD 80W-90
 ROLF TRANSMISSION M5 A-LS 80W-90
 SASOL DIFFERENTIAL OIL LIMITED SLIP 80W-90
 SAVSOL AUTOGEAR 90 LIMITED SLIP GL-5
 SENLUBE GEAR HYPOID LS
 SHELL SPIRAX S3 ALS 80W-90
 SHELL SPIRAX S3 ALS 85W-90
 SINOPEC GREATWALL ZLS GL-5 85W/90
 SK ZIC G-5 LSD 80W-90
 SRS VIOLIN RSH
 TOTAL DYNATRANS LS 80W-90
 ELF TRACTELF BLS 80W-90
 DYNATRANS DA 80W-90
 DYNATRANS LS 80W-90
 CLASS AGRISHIFT BLS 80W-90
 GEAR AB-EP 85W90
 GEAR DURA 80W90 LS
 VALVOLINE HEAVY DUTY AXLE OIL PRO 80W-90 LS
 NESTE AXLE LS 80W-90
 WOLF OFFICIALTECH 80W90 LS GL 5
 ZF POWERFLUID GEAR LS

ZF approval number

ZF000629
 ZF000703
 ZF003689
 ZF004776
 ZF001167
 ZF002257
 ZF004736
 ZF002141
 ZF002178
 ZF001050
 ZF003555
 ZF000787
 ZF000809
 ZF000810
 ZF001287
 ZF000031
 ZF002301
 ZF000651
 ZF001479
 ZF001341
 ZF000891
 ZF001578
 ZF003705
 ZF008267
 ZF000424
 ZF001312
 ZF002109
 ZF000845
 ZF001367
 ZF001345
 ZF001114
 ZF001637
 ZF008206
 ZF008260
 ZF003447
 ZF000049
 ZF000740
 ZF000603
 ZF001272
 ZF000924
 ZF003352
 ZF000027
 ZF003410
 ZF001480
 ZF000546
 ZF000781
 ZF000901
 ZF001373
 ZF009452
 ZF001004
 ZF000981
 ZF008276
 ZF003625
 ZF000700
 ZF001898
 ZF008345
 ZF001303
 ZF004813
 ZF000127
 ZF003340
 ZF000442
 ZF001545
 ZF006120
 ZF006121
 ZF006122
 ZF008173
 ZF000526
 ZF001465
 ZF001996
 ZF004847
 ZF003552
 ZF008414

Lubricant class 05E

Universal axle and transmission oil

Manufacturer (05E)

CNH INDUSTRIAL AMERICA LLC, RACINE, WI/US
VIBRA ENERGIA S.A., DUQUE DE CAXIAS/BR

Trade name (05E)

PREMIUM TRANSAXLE OIL 80W-140
LUBRAX UNITRACTOR 10W-30

ZF approval number

ZF005941
ZF010660

Manufacturer (05F)

PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY
 PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY
 PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY
 PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY
 PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY
 PHI OIL GMBH, ST. GEORGEN/AT
 RAVENSBERGER SCHMIERSTOFFVERTRIEB GMBH, WERTHER/DE
 RAVENSBERGER SCHMIERSTOFFVERTRIEB GMBH, WERTHER/DE
 REPSOL LUBRICANTES Y ESPECIALIDADES, S.A, MADRID/ES
 SAME DEUTZ FAHR, TREVIGLIO/IT
 SAME DEUTZ FAHR, TREVIGLIO/IT
 SASOL ENERGY, JOHANNESBURG/ZA
 SASOL ENERGY, JOHANNESBURG/ZA
 SAVITA OIL TECHNOLOGIES LIMITED, MUMBAI/IN
 SENNEBOGEN MASCHINENFABRIK GMBH, STEINACH/DE
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB
 SINENG PETROCHEMICAL CO.,LTD., LIUZHOU, GUANGXI/CN
 SINOPEC LUBRICANT CO., LTD., BEIJING/CN
 SINOPEC LUBRICANT CO., LTD., BEIJING/CN
 SK ENMOVE CO.,LTD., SEOUL/KR
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
 UNIL OPAL, SAUMUR/FR
 UNIL OPAL, SAUMUR/FR
 VALVOLINE EUROPE, DORDRECHT/NL
 VALVOLINE EUROPE, DORDRECHT/NL
 VIBRA ENERGIA S.A., DUQUE DE CAXIAS/BR
 WOLF OIL CORPORATION N.V., HEMIKSEM/BE

Trade name (05F)

PETRONAS TUTELA TRANSAXLE FLUID 20W-40
 PETRONAS TUTELA TRANSAXLE FLUID 80W140
 PETRONAS TUTELA TRANSAXLE FLUID 80W
 PETRONAS TUTELA TRANSAXLE FLUID 80W
 PETRONAS TUTELA TRANSAXLE FLUID 20W-40
 GEAR OIL UTTO SILVER 10W-30
 RAVENOL GETRIEBEOEL UTTO
 RAVENOL UTTO SYNTHETIC
 REPSOL ORION UTTO
 SDF UTTO
 DF UTTO
 UNIVERSAL TRANSMISSION OIL 68
 SASOL UNIVERSAL TRANSMISSION OIL RS 68
 SAVSOL 315 HAT
 SENLUBE GEAR LONGLIFE
 SHELL SPIRAX S4 TXM
 SHELL SPIRAX S4 TXM
 SHELL SPIRAX S4 TXM
 SHELL SPIRAX S6 TXME
 SHELL SPIRAX S4 TXM
 SHELL SPIRAX S4 TXM
 SHELL SPIRAX S4 TXM
 SHELL SPIRAX S4 TXM
 SHELL SPIRAX S4 TXM-I
 SEANON DEDICATED TRANSMISSION OIL 10W-30
 SINOPEC GREATWALL UTTO
 SINOPEC UTTO
 SK ZIC GL-4 ZF 80W
 SRS HYDROFLUID A
 TOTAL DYNATRANS MPV
 ELF TRACTELF BF 16
 TOTAL DYNATRANS LS 20W-40
 TOTAL DYNATRANS MPWB
 TOTAL DYNATRANS MPX
 TRACTELF NG
 UNIL OPAL FLUID MVZ
 FLUID G2 VARIO
 UNITRAC 80W
 NESTE GEAR UTTO
 LUBRAX UNITRAC SAE 10W-30
 WOLF TRACTOFLUID 170 BM

ZF approval number

ZF009459
 ZF009460
 ZF010000
 ZF010231
 ZF010264
 ZF000958
 ZF001718
 ZF008204
 ZF003445
 ZF002229
 ZF002230
 ZF000707
 ZF001828
 ZF001131
 ZF008341
 ZF000357
 ZF000358
 ZF000359
 ZF001295
 ZF001613
 ZF003325
 ZF005938
 ZF008286
 ZF001959
 ZF000105
 ZF004916
 ZF003380
 ZF004867
 ZF000540
 ZF001317
 ZF001346
 ZF001539
 ZF002222
 ZF008262
 ZF003565
 ZF009470
 ZF002041
 ZF003473
 ZF001366
 ZF005951

Lubricant class 05G

Premium universal axle and transmission oil

Manufacturer (05G)

SINOPEC LUBRICANT CO., LTD., BEIJING/CN
ZF FRIEDRICHSHAFEN AG, FRIEDRICHSHAFEN/DE
ZF FRIEDRICHSHAFEN AG, FRIEDRICHSHAFEN/DE

Trade name (05G)

SINOPEC GREATWALL HD DRIVE AXLE OIL
ZF POWERFLUID C-PLUS
ZF POWERFLUID PLUS

ZF approval number

ZF002162
ZF002087
ZF005995

Lubricant class 05K

Engine oil

Viscosity grades: SAE 10W, 10W-30, 10W-40

in accordance with Specification

API CD/CE/CF-4/CF/CG-4/CH-4/CI-4/CI-4 Plus/CJ-4

or SF/SG/SH/SJ/SL/SM

or ACEA, categories A, B, E

Note:

All trade products which satisfy the above specifications may be used. There will be no product listing.

Lubricant class 05L

Automatic Transmission Fluid (ATF) based on mineral base fluids according to former Dexron IID, IIIF, IIIG or IIIH specification by General Motors.

Note:

All trade products which satisfy the above specifications may be used. There will be no product listing.

Lubricant class 05M

Mineral oil-based hydraulic oil HLP in accordance with DIN 51524-2 or mineral oil-based hydraulic oil HVLP in accordance with DIN 51524-3.

Viscosity grades: ISO VG 32 / 46 / 68

Note:

All trade products which satisfy the above specifications may be used. There will be no product listing.

In addition, the following trade products may be used:

Manufacturer (05M)

PANOLIN DISTRIBUTION AG, MADETSWIL/CH
PANOLIN DISTRIBUTION AG, MADETSWIL/CH
PANOLIN DISTRIBUTION AG, MADETSWIL/CH
SAVITA OIL TECHNOLOGIES LIMITED, MUMBAI/IN

Trade name (05M)

PANOLIN HLP SYNTH 46
PANOLIN HLP SYNTH 68
PANOLIN HLP SYNTH 32
TATA HITACHI SUPREME P

ZF approval number

ZF000592
ZF002019
ZF008238
ZF001707

Lubricant class 05N

Gear oil with limited-slip-additives

Viscosity grades: SAE 75W-90 / 75W-110 / 75W-140 / 80W-90 / 85W-90 / 90

Manufacturer (05N)

BAYWA AG MÜNCHEN, MÜNCHEN/DE
 EXXONMOBIL CORPORATION, HOUSTON, TX/US
 EXXONMOBIL CORPORATION, HOUSTON, TX/US
 FUCHS PETROLUB SE, MANNHEIM/DE
 KROON-OIL B.V., ALMELO/NL
 ROCK OIL, WARRINGTON/GB
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
 ZELLER+GMELIN GMBH&CO.KG, EISLINGEN/DE

Trade name (05N)

TECTROL MULTIGEAR LS 90 LV
 MOBIL DELVAC MODERN AXLE OIL 80W-90 LIMITED SLIP
 MOBIL DELVAC MODERN AXLE OIL 80W-90 LIMITED SLIP
 TITAN SUPERGEAR LS SAE 80W-90
 GEARLUBE LS 80W-90
 SD LS 80W-90
 SRS VIOLIN RSH PLUS 80W-90
 DYNATRANS DAX 80W-90
 DIVINOL MULTI-AXLE LS 80W90

ZF approval number

ZF009443
 ZF009436
 ZF010924
 ZF008289
 ZF009458
 ZF010297
 ZF009472
 ZF009422
 ZF010462