



Industrial Technology

## Axles for off-road vehicles

## List of lubricants TE-ML 05

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The list of lubricants TE-ML 05, **edition 01.10.2018** replaces all previous editions. The current list can be requested from any ZF after-sales service center or accessed on the Internet under [www.zf.com/lubricants](http://www.zf.com/lubricants).

**ZF Friedrichshafen AG**  
D-88038 Friedrichshafen  
[www.zf.com/contact](http://www.zf.com/contact)

## 1. Current products

Product groups	Series	Lubricant classes for service fills <sup>(1)</sup>
<b>Compactor</b>	MT-C 3035, MT-C 3065, MT-C 3075	05C
<b>Motor grader</b>	MT-G 3070, MT-G 3075, MT-G 3080, MT-G 3085, MT-G 3090, WH-L3065, WH-L3075	<a href="#">ZF-Powerfluid Plus</a> 05F / 05G / 05H
<b>Dumper</b>	Axle/Wheel head: MT-D 3105	<a href="#">ZF-Powerfluid Plus</a> 05C / 05F / 05G / 05H
	Brake: MT-D 3105, WH-D 3105, MT-D 3085, MT-D 3095	<a href="#">ZF-Powerfluid Plus</a> 05F / 05G / 05H
	Axle inserts	<a href="#">ZF-Powerfluid Plus</a> 05C / 05F / 05G / 05H
<b>Wheel loader</b>	MT-L series, paper brake lining: MT-L 3065, MT-L 3075, MT-L 3085, MT-L 3095, MT-L 3105 AP-410, AP-412, AP-L 3085, AP-L 3095	<a href="#">ZF-Powerfluid Plus</a> 05C / 05F / 05G / 05H
	MT-L series, sintered brake lining: MT-L 3065, MT-L 3075, MT-L 3085, MT-L 3095, MT-L 3105, MT-L 3115, MT-L 3125, MT-L 3135	<a href="#">ZF-Powerfluid Plus</a> 05F / 05G / 05H
<b>Backhoe loader</b>	Rear axle: MT-B 3065, MT-B 3070, MT-2075, MT-2085, MS-B 3070	<a href="#">ZF-Powerfluid Plus</a> 05F / 05G / 05H
	Front axle: MS-B 3025, MS-2045, MS-B 3055	<a href="#">ZF-Powerfluid Plus</a> 05C / 05F / 05G / 05H
<b>Telescopic handler</b>	MS-T 3045, MS-T 3055, MS-T 3060	<a href="#">ZF-Powerfluid Plus</a> 05F / 05G / 05H
<b>Compact loader</b>	AV230	05A / 05C
	MT-L 3015, MS-L 3015, MT-L 3020, MT-L 3045, MT-L 3055	<a href="#">ZF-Powerfluid Plus</a> 05C / 05F / 05G / 05H
<b>Mobile excavator</b>	MS-E 3050, MT-E 3050, MS-E 3060, MT-E 3060, MS-E 3070, MT-E 3070	<a href="#">ZF-Powerfluid Plus</a> 05C / 05F / 05G / 05H

**2. Products not listed in detail**

Product groups	Lubricant classes for service fills <sup>(1)</sup>	
	without	with
	wet multi-disc brakes and / or multi-disc limited-slip differentials	
Axles Differentials Axle inserts Wheel hubs	<a href="#">ZF-Powerfluid Plus</a> 05A / 05C 05F / 05G / 05H	<a href="#">ZF-Powerfluid Plus</a> 05C / 05F / 05G / 05H
Axles, differentials and axle inserts with hypoid drive	05A / 05C	05C

**Note:** APL 9000 see TE-ML 12

**3. Hydraulic fluids**

Product group	Lubricant classes for service fills <sup>(1)</sup>	Use at outside temperatures
Brake hydraulics, hydraulic differential lock (DHL) and steering	05L	- 40°C
	lubricants in accordance with JDM J20D	- 40°C
	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	ZF Powergrease (ZF P/N 0671 090 354) 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**

Lubricant class	05A, 05C	ZF Powerfluid Plus 05F, 05G, 05H
Load class	Oil change interval	
1	1500 h	2000 h
2	1000 h	1500 h
3	500 h	1000 h

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

## 6. Load classes

Load class	Examples of applications
1	<ul style="list-style-type: none"> <li>- Dumper</li> <li>- Mobile excavator with low driving-mode share (&lt;25%) and equipment in material handling</li> <li>- Wheel loader with low share of service brake use</li> <li>- Other axles without wet brakes</li> <li>- Backhoe loader under normal operating conditions</li> </ul>
2	<ul style="list-style-type: none"> <li>- Mobile excavator with increased driving-mode share (&gt;25%) and equipment in timber handling</li> <li>- Wheel loader, grader, telescopic handler</li> <li>- Backhoe loader under extreme operating conditions</li> <li>- Compactors</li> </ul>
3	<ul style="list-style-type: none"> <li>- Wheel loader operated under extreme braking conditions</li> <li>- Generally all vehicles operated in outdoor temperatures &gt; 40°C</li> </ul>

## 7. Explanation of footnotes and comments

### Footnotes

- (1) **The lubricant classes listed are compulsory for service oil changes according to the oil-change intervals mentioned under Section 5. Additional requirements apply to ZF factory fills.**

### 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 / 80W-110 / 80W-140 / 85W-90 / 85W-110 / 85W-140 / 90

#### Manufacturer (05A)

ADDINOL LUBE OIL GMBH, LEUNA/DE  
 ADDINOL LUBE OIL GMBH, LEUNA/DE  
 ARAL AG, BOCHUM/DE  
 ARAL AG, BOCHUM/DE  
 ARAL AG, BOCHUM/DE  
 ARAL AG, BOCHUM/DE  
 ARAL AG, BOCHUM/DE  
 ARAL AG, BOCHUM/DE  
 BAHRAIN PETROLEUM COMPANY, AWALI/BH  
 BAHRAIN PETROLEUM COMPANY, AWALI/BH  
 BAHRAIN PETROLEUM COMPANY, AWALI/BH  
 BASF SE, LUDWIGSHAFEN/DE  
 BASF SE, LUDWIGSHAFEN/DE  
 BASF SE, LUDWIGSHAFEN/DE  
 BASF SE, LUDWIGSHAFEN/DE  
 BAYWA AG MÜNCHEN, MÜNCHEN/DE  
 BP PLC., LONDON/GB  
 BP PLC., LONDON/GB  
 BP PLC., LONDON/GB  
 BP PLC., LONDON/GB  
 BP PLC., LONDON/GB  
 BUCHER AG LANGENTHAL, LANGENTHAL/CH  
 BUCHER AG LANGENTHAL, LANGENTHAL/CH  
 BUCHER AG LANGENTHAL, LANGENTHAL/CH  
 BUCHER AG LANGENTHAL, LANGENTHAL/CH  
 BUCHER AG LANGENTHAL, LANGENTHAL/CH  
 BUCHER AG LANGENTHAL, LANGENTHAL/CH  
 CASTROL LTD, LONDON/GB  
 CASTROL LTD, LONDON/GB  
 CASTROL LTD, LONDON/GB  
 CASTROL LTD, LONDON/GB  
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 CASTROL LTD, LONDON/GB  
 CASTROL LTD, LONDON/GB  
 CASTROL LTD, LONDON/GB  
 CASTROL LTD, LONDON/GB  
 CEPSA COMERCIAL PETRÓLEO S.A.U., MADRID/ES  
 CEPSA COMERCIAL PETRÓLEO S.A.U., MADRID/ES  
 CEPSA COMERCIAL PETRÓLEO S.A.U., MADRID/ES  
 CEPSA COMERCIAL PETRÓLEO S.A.U., MADRID/ES  
 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  
 CHEVRON LUBRICANTS, SAN RAMON, CA/US  
 CHEVRON LUBRICANTS, SAN RAMON, CA/US  
 CHEVRON LUBRICANTS, SAN RAMON, CA/US  
 CHEVRON LUBRICANTS, SAN RAMON, CA/US  
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 CHEVRON LUBRICANTS, SAN RAMON, CA/US  
 CHEVRON LUBRICANTS, SAN RAMON, CA/US  
 CHEVRON LUBRICANTS, SAN RAMON, CA/US  
 CHEVRON LUBRICANTS, SAN RAMON, CA/US  
 CLASS KGAA MBH, HARSEWINKEL/DE  
 CONDAT LUBRIFIANTS, CHASSE SUR RHONE/FR  
 CYCLON HELLAS SA, ATHENS/GR  
 DAF TRUCKS NV, EINDHOVEN/NL  
 DE OLIEBRON BV, ZWIJNDRECHT/NL  
 DE OLIEBRON BV, ZWIJNDRECHT/NL  
 EKO ABEE, ATHENS/GR  
 ENI S.P.A., ROME/IT  
 ENI S.P.A., ROME/IT  
 ENI S.P.A., ROME/IT  
 ENI S.P.A., ROME/IT  
 EXXONMOBIL CORPORATION, HOUSTON, TX/US  
 EXXONMOBIL CORPORATION, HOUSTON, TX/US  
 EXXONMOBIL CORPORATION, HOUSTON, TX/US  
 EXXONMOBIL CORPORATION, HOUSTON, TX/US  
 EXXONMOBIL CORPORATION, HOUSTON, TX/US  
 EXXONMOBIL CORPORATION, HOUSTON, TX/US  
 EXXONMOBIL CORPORATION, HOUSTON, TX/US  
 FABRIKA MAZIVA FAM AD, KRUSÉVAC/RS  
 FABRIKA MAZIVA FAM AD, KRUSÉVAC/RS  
 FABRIKA MAZIVA FAM AD, KRUSÉVAC/RS  
 FINKE MINERALÖLWERK GMBH, 27374 VISSLHÖVEDE/DE  
 FINKE MINERALÖLWERK GMBH, 27374 VISSLHÖVEDE/DE

#### Trade name (05A)

ADDINOL GETRIEBEÖL GX 80W-90 ML  
 ADDINOL GETRIEBEÖL GH 75 W 90 SL  
 ARAL GETRIEBEÖL BS 75W-90  
 ARAL GETRIEBEÖL SNA-C 75W-90  
 ARAL GETRIEBEÖL SNA-D 80W-90  
 ARAL GETRIEBEÖL SNA-E 75W-90  
 ARAL GETRIEBEÖL EP PLUS 80W-90  
 ARAL GETRIEBEÖL HYP 85W-140  
 SPAREX EP 90 GL-5  
 SPAREX EP 80W-90 GL-5  
 SPAREX EP 85W-140 GL-5  
 EMGARD UAF 4209  
 EMGARD RW-A, SAE 75W-90  
 EMGARD HP 75W-90  
 EMGARD UAF 7105  
 TECTROL MULTIGEAR PLUS 8090  
 BP ENERGEGEAR HT 80W-90  
 BP ENERGEGEAR HYPO XL 80W-90  
 BP ENERGEGEAR SHX-M 75W-90  
 BP ENERGEGEAR HYPO 85W-140  
 BP ENERGEGEAR HYPO 80W-90  
 UNISYNT ZX SAE 75W90  
 GEAR ZX TP SAE 80W/90  
 GEAR ZX TP SAE 80W/140  
 GEAR OIL HYPOID SAE80W/90  
 PENTA TL SAE 75W90  
 UNIVERSAL CT SAE 80W/90  
 CASTROL SYNTRAX UNIVERSAL 80W-90  
 CASTROL AXLE LONG DRAIN 80W-90  
 CASTROL SYNTRAX LONG LIFE 75W-90  
 CASTROL AXLE EPX 85W-140  
 CASTROL AXLE EPX 80W-90  
 SYNTRAX UNIVERSAL PLUS 75W-90  
 CASTROL AXLE EPX 80W-90  
 CASTROL TRANSMAX AXLE LONG LIFE 75W-90  
 CASTROL TRANSMAX UNIVERSAL LL 80W-90  
 CASTROL TRANSMAX UNIVERSAL LL 75W-90  
 CASTROL TRANSMAX AXLE EPX 85W-140  
 CASTROL TRANSMAX AXLE EPX 80W-90  
 CEPSA TRANSMISIONES EP 80W-90  
 CEPSA TRANSMISIONES EP 85W-140  
 CEPSA TRANSMISIONES EP FE+LD 75W-90  
 MAN SUPER AXLE 3343 75W-90  
 MAN SUPER AXLE 342-M2  
 CHAMPION OEM SPECIFIC 75W90 GL 5  
 MULTIGEAR 80W-90  
 MULTIGEAR S 75W-90  
 MULTIGEAR PREMIUM EP SAE 85W-140  
 MULTIGEAR S 75W-140  
 MULTIGEAR EP-5 SAE 80W-90  
 DELO GEAR EP-5 SAE 85W-140  
 DELO GEAR EP-5 SAE 80W-90  
 DELO GEAR TDL 80W-90  
 DELO SYN-GEAR XS 75W-140  
 DELO SYN-TDL 75W-90  
 DELO GEAR CGA SAE 80W-90  
 DELO GEAR CGA SAE 80W-90  
 CLAAS AGRISHIFT MT 80W-90  
 GEAR TXS 75W90  
 GEAR EP GL-5 80W-90  
 DAF SUPER 80W-90  
 TOR UNI GEAR LD 75W90  
 TOR UNI GEAR 75W110 LD  
 EKO GEAROL-5 80W-90  
 ENI ROTRA MP 80W-90  
 ENI ROTRA MP 85W-140  
 ENI ROTRA LSX 75W-90  
 ENI ROTRA MP 75W-90  
 MOBILUBE 1 SHC 75W-90  
 MOBILUBE HD-A PLUS 80W-90  
 MOBIL DELVAC SYNTHETIC GEAR OIL 75W-90  
 MOBIL DELVAC SYNTHETIC GEAR OIL 80W-140  
 MOBILUBE S 80W-90  
 MOBIL DELVAC 1 GEAR OIL 75W-90  
 MOBIL DELVAC 1 GEAR OIL 80W-140  
 MULTIHIPPO 75W-90 SINT  
 MULTIHIPPO 80W-90 F PLUS  
 MULTIHIPPO 80W-140 F PLUS  
 AVIATICON FINKOGEAR PREMIUM 75W-90  
 AVIATICON FINKOGEAR SUPER 80W-90

#### ZF approval number

ZF000672  
 ZF002260  
 ZF000133  
 ZF000134  
 ZF000135  
 ZF000142  
 ZF000460  
 ZF000930  
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 ZF001682  
 ZF000653  
 ZF001456  
 ZF001749  
 ZF002249  
 ZF002299





**Lubricant class 05C**

Gear oil with limited-slip-additives

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

**Manufacturer (05C)**

ADDINOL LUBE OIL GMBH, LEUNA/DE  
 ADDINOL LUBE OIL GMBH, LEUNA/DE  
 ARAL AG, BOCHUM/DE  
 ARAL AG, BOCHUM/DE  
 AVISTA OIL DEUTSCHLAND GMBH, UETZE/DE  
 BAYWA AG MÜNCHEN, MÜNCHEN/DE  
 BELGIN MADENI YAGLAR TIC. VE SAN. A.S., KOCAELI/TR  
 BUCHER AG LANGENTHAL, LANGENTHAL/CH  
 CASTROL LTD, LONDON/GB  
 CASTROL LTD, LONDON/GB  
 CASTROL LTD, LONDON/GB  
 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  
 CHEVRON LUBRICANTS, SAN RAMON, CA/US  
 CHEVRON LUBRICANTS, SAN RAMON, CA/US  
 CLASS KGAA MBH, HARSEWINKEL/DE  
 EXXONMOBIL CORPORATION, HOUSTON, TX/US  
 EXXONMOBIL CORPORATION, HOUSTON, TX/US  
 FINKE MINERALÖLWERK GMBH, 27374 VISSSELHÖVEDE/DE  
 FUCHS PETROLUB SE, MANNHEIM/DE  
 GAZPROMNEFT-LUBRICANTS, MOSCOW/RU  
 GAZPROMNEFT-LUBRICANTS, MOSCOW/RU  
 GAZPROMNEFT-LUBRICANTS, MOSCOW/RU  
 GEORG OEST MINERALÖLWERK GMBH & CO.KG, FREUDENSTADT/DE  
 GRUPA LOTOS S.A., GDANSK/PL  
 GRUPA LOTOS S.A., GDANSK/PL  
 GS CALTEX CORPORATION, SEOUL/KR  
 GULF OIL INTERNATIONAL, MUMBAI/IN  
 HINDUSTAN PETROLEUM CORPORATION LTD., MUMBAI/IN  
 INA MAZIVA LTD., ZAGREB/HR  
 INDIAN OIL CORPORATION LTD, MUMBAI/IN  
 INDIAN OIL CORPORATION LTD, MUMBAI/IN  
 JOHN DEERE, MOLINE, ILLINOIS/US  
 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  
 MOL-LUB KFT, ALMASFUZITO/HU  
 MORRIS LUBRICANTS, SHREWSBURY/GB  
 NILS SPA, BURGSTALL/IT  
 NORTHLAND PRODUCTS COMPANY, WATERLOO, IOWA/US  
 NORTHLAND PRODUCTS COMPANY, WATERLOO, IOWA/US  
 OILFINO MINERALÖL GMBH, PRISDORF/DE  
 OOO "LLK-INTERNATIONAL", MOSCOW/RU  
 OOO "LLK-INTERNATIONAL", MOSCOW/RU  
 ORLEN OIL SP. Z O.O., KRAKOW/PL  
 ORLEN OIL SP. Z O.O., KRAKOW/PL  
 ORLEN OIL SP. Z O.O., KRAKOW/PL  
 OY TEBOIL AB, HELSINKI/FI  
 PAKELO MOTOR OIL, SAN BONIFACIO (VR)/IT  
 PANOLIN AG, MADETSWIL/CH  
 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  
 PTT OIL AND RETAIL BUSINESS PLC., BANGKOK/TH  
 RAVENSBERGER SCHMIERSTOFFVERTRIEB GMBH, WERTHER/DE  
 REPSOL LUBRICANTES Y ESPECIALIDADES, S.A, MADRID/ES  
 RN-LUBRICANTS, LLC, MOSCOW/RU  
 RN-LUBRICANTS, LLC, MOSCOW/RU  
 SASOL OIL, RANDBURG/ZA  
 SAVITA OIL TECHNOLOGIES LIMITED, MUMBAI/IN  
 SAVITA OIL TECHNOLOGIES LIMITED, MUMBAI/IN  
 SINOPEC LUBRICANT CO., LTD., BEIJING/CN  
 SK LUBRICANTS, SEOUL/KR  
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE  
 TOTAL LUBRIFIANTS S.A., NANTERRE/FR  
 TOTAL LUBRIFIANTS S.A., NANTERRE/FR  
 TOTAL LUBRIFIANTS S.A., NANTERRE/FR  
 TOTAL LUBRIFIANTS S.A., NANTERRE/FR  
 TOTAL LUBRIFIANTS S.A., NANTERRE/FR  
 TOTAL LUBRIFIANTS S.A., NANTERRE/FR

**Trade name (05C)**

ADDINOL GETRIEBEÖL GH 85W-90 LS  
 ADDINOL GETRIEBEÖL GH 80W-90 LS  
 ARAL GETRIEBEÖL BS-LSX 75W-140  
 ARAL GETRIEBEÖL HYP LS 85W-90  
 PENNASOL LIMITED SLIP HYPOID GEAR OIL LS SAE 90  
 TECTROL MULTIGEAR LS 90  
 BELGEAR LS 85W90  
 MOTOREX UNIVERSAL LS SAE 90  
 CASTROL SYNTRAX LIMITED SLIP 75W-140  
 CASTROL AXLE Z LIMITED SLIP 90  
 CASTROL AXLE Z LIMITED SLIP 85W-90  
 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  
 GEARTEX LS SAE 85W-140  
 CLAAS AGRISHIFT BLS 90  
 MOBILUBE LS 85W-90  
 GEARLUBE VS 500  
 AVIATICON HYPOID LS 90  
 FUCHS TITAN GEAR LS SAE 90  
 G-TRUCK LS 80W-90  
 G-TRUCK LS 85W-140  
 G-TRUCK LS 85W-90  
 OEST GETRIEBEÖL HYPOID LS 90  
 LOTOS TITANIS LS GL-5 80W-90  
 LOTOS TITANIS LS GL-5 SAE 85W-140  
 DOOSAN LS GEAR OIL 80W90  
 GULF GEAR LS 90  
 HP GEAR OIL ZFL 80W 90 LS  
 INA HIPENOL GTL LS 90  
 SERVO GEAR SUPER LS 90  
 SERVO GEAR SUPER LS 80W-90  
 JOHN DEERE GL-5 GEAR LUBRICANT W/LS ADD 80W-90  
 JOHN DEERE GL-5 GEAR LUBRICANT W/LS ADD 85W-140  
 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 85W140  
 MOL HYKOMOL LS 85W90  
 TERRAIN LS 80W-90  
 ALGOL HYPOID LS 90  
 POSI-GRIP JDZF 80W90  
 POSI-GRIP JDZF 85W140  
 OILFINO VARIUS G 400LS 85W-90  
 LUKOIL TRANSMISSION LS 85W-90  
 LUKOIL TRANSMISSION LS 80W-90  
 PLATINUM GEAR LS 80W-90  
 PLATINUM AGRO LS 80W-90  
 PLATINUM GEAR LS 85W-140  
 TEBOIL HYPOID LS 80W-90  
 UNIVERSAL GEAR EP LS SAE 85W/90  
 PANOLIN SUPER DUTY LS 90  
 GALP TRANSOIL HP LS 90  
 MAXIGEAR EP-X 85W-90LS  
 AMBRA AXF 80W-90 (SAE 80W-90)  
 AKCELA AXLEPOWER (SAE 80W-90)  
 AKROS AXLEGEAR 80W-90 (SAE 80W-90)  
 TUTELA TRANSMISSION W90/LS (SAE 80W-90)  
 ARBOR TTF (SAE 80W-90)  
 SUPERGEAR BRONZE 85W90 LS  
 PTT LIMITED SLIP (SAE 80W-90)  
 RAVENOL SPERRDIFF.-GETR.-OEL LS 90  
 REPSOL CARTAGO EP AUTOBLOCANTE SAE 80W90  
 TNK TRANS GIPOID LS 80W-90  
 TNK TRANS GIPOID LS 85W-90  
 SASOL DIFFERENTIAL OIL LIMITED SLIP 80W-90  
 SAVSOL AUTOGEAR 85W140 LIMITED SLIP GL5  
 SAVSOL AUTOGEAR 90 LIMITED SLIP GL-5  
 SINOPEC GREATWALL ZLS GL-5 85W/90  
 SK ZIC G-5 LSD 80W-90  
 SRS WIOLIN RSH  
 TOTAL DYNATRANS DA 80W-90  
 TOTAL DYNATRANS DA 85W-140  
 TOTAL DYNATRANS LS 80W-90  
 ELF TRACTELF BLS 80W-90  
 GULF LS REAR AXLE 80W-90  
 TOTAL DYNATRANS DA 80W-90

**ZF approval number**

ZF000629  
 ZF000703  
 ZF000140  
 ZF000465  
 ZF000844  
 ZF001167  
 ZF002257  
 ZF000727  
 ZF000269  
 ZF000307  
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 ZF002141  
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 ZF001050  
 ZF003555  
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 ZF000127  
 ZF003340  
 ZF000442  
 ZF001255  
 ZF001512  
 ZF001545  
 ZF001546  
 ZF001548  
 ZF002309



**Manufacturer (05C)**

UNIL OPAL, SAUMUR/FR  
VALVOLINE CUMMINS PVT LIMITED, GURGAON/IN  
VALVOLINE EUROPE, DORDRECHT/NL  
WOLF OIL CORPORATION N.V., HEMIKSEM/BE  
YACCO SAS, ST PIERRE LES ELBEUF/FR

**Trade name (05C)**

GEAR AB-EP 85W90  
GEAR DURA 80W90 LS  
VALVOLINE HEAVY DUTY AXLE OIL PRO 80W-90 LS  
WOLF OFFICIALTECH 80W90 LS GL 5  
BVX LS 200 80W-90

**ZF approval number**

ZF000526  
ZF001465  
ZF001996  
ZF003552  
ZF001614



**Manufacturer (05F)**

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  
 SINOPEC LUBRICANT CO., LTD., BEIJING/CN  
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE  
 TOTAL LUBRIFIANTS S.A., NANTERRE/FR  
 TOTAL LUBRIFIANTS S.A., NANTERRE/FR  
 TOTAL LUBRIFIANTS S.A., NANTERRE/FR  
 TOTAL LUBRIFIANTS S.A., NANTERRE/FR  
 TOTAL LUBRIFIANTS S.A., NANTERRE/FR  
 VALVOLINE CUMMINS PVT LIMITED, GURGAON/IN  
 VALVOLINE EUROPE, DORDRECHT/NL

**Trade name (05F)**

SHELL SPIRAX S4 TXM  
 SHELL SPIRAX S4 TXM  
 SHELL SPIRAX S4 TXM  
 SHELL SPIRAX S6 TXME  
 SHELL SPIRAX S4 TXM  
 SHELL SPIRAX S4 TXM  
 SINOPEC GREATWALL UTTO  
 SRS HYDROFLUID N  
 TOTAL DYNATRANS MPV  
 ELF TRACTELF BF 16  
 TOTAL DYNATRANS LS 20W-40  
 TOTAL DYNATRANS MPWB  
 TOTAL DYNATRANS MPX  
 VALVOLINE UTF PREMIUM  
 UNITRAC 80W

**ZF approval number**

ZF000357  
 ZF000358  
 ZF000359  
 ZF001295  
 ZF001613  
 ZF003325  
 ZF000105  
 ZF000827  
 ZF000540  
 ZF001317  
 ZF001346  
 ZF001539  
 ZF002222  
 ZF002218  
 ZF002041

**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 PLUS  
ZF-POWERFLUID C-PLUS

**ZF approval number**

ZF002162  
ZF001021  
ZF002087

**Lubricant class 05H**

Biodegradable lubricants

Viscosity grade: SAE 75W-80

**Instructions on the use of biodegradable lubricants:**

The oil manufacturer's change-over directives included in the product description are to be observed when change-over to biodegradable lubricants is effected.

**Manufacturer (05H)**

PANOLIN AG, MADETSWIL/CH

**Trade name (05H)**

PANOLIN BIOFLUID LS

**ZF approval number**

ZF001206

**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.