



**Manual ZF transmissions for trucks  
with "TE-ML 01" lable on the type plate**

**List of lubricants TE-ML 01**

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**1. Approved lubricant classes**

Product groups trucks  Note: Instead of the "0" as the last figure, there may also be a: 2;3;4;5. (Example: 16S2223)	Lubricant classes	
	First fill <sup>(3)</sup>	Service fill <sup>(4)</sup>
<b>Ecomid without Intarder</b> 8S1110, 9S1110, 9S1310, 9S1510	<a href="#">ZF EcoFluid M</a> 01E	<a href="#">ZF EcoFluid M</a> 01E / 01L
<b>Ecomid with Intarder</b> 8S1111, 9S1111, 9S1311	<a href="#">ZF EcoFluid M</a> 01E	<a href="#">ZF EcoFluid M</a> 01E / 01L
<b>Ecosplit without Intarder</b> 8S151, 16S151, 8S181, 16S181, 16S221,16S251 8S1620, 16S1620, 8S1820, 16S1820, 8S1920, 16S1920, 16S2020, 8S2220, 16S2220, 16S2520, 16S2720 16S1580, 16S1680, 16S2180, 16S2280 16S231, 16S2320, 16S2330 12S2130, 12S2330, 12S2830 8S1630, 16S1630, 8S1830, 16S1830, 8S1930, 16S1930, 16S2030, 8S2230, 16S2230, 16S2530, 16S2733	<a href="#">ZF EcoFluid M</a> 01E	<a href="#">ZF EcoFluid M</a> 01E / 01L
<b>Ecosplit with Intarder</b> 8S1511T, 16S1511T, 8S1811T, 16S1811T, 16S2211T, 16S2511T 8S1621, 16S1621, 8S1821, 16S1821, 8S1921, 16S1921, 16S2021, 8S2221, 16S2221, 16S2521, 16S2721 16S1581, 16S1681, 16S2181, 16S2281 16S2311T, 16S2321, 12S2331 12S2131, 12S2331, 12S2831 16S1631, 8S1831, 16S1831, 8S1931, 16S1931,16S2031, 8S2231, 16S2231, 16S2531, 16S2731	<a href="#">ZF EcoFluid M</a> 01E	<a href="#">ZF EcoFluid M</a> 01E / 01L

The list of lubricants TE-ML 01, <b>edition 10.10.2024</b> replaces all previous editions. The current list can be requested from any ZF after-sales service center or accessed on the Internet under <a href="http://www.aftermarket.zf.com/lubricants">www.aftermarket.zf.com/lubricants</a> .	<b>ZF Friedrichshafen AG</b> D-88038 Friedrichshafen <a href="http://www.zf.com/contact">www.zf.com/contact</a>
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**2. Oil and filter change intervals (filter replacement affects only transmission with Intarder or WSK [torque converter clutch])**

**Caution: Please refer to the previous pages, Section 1, tables, for information on the lubricant classes released for the individual product groups.**

ZF EcoFluid M was specially designed for applications with manual transmissions and automatic transmissions in commercial vehicles. The combination of a hydrocrack base oil with a specially balanced additive package ensures excellent oxidation stability and is thus excellently suited for very long oil change intervals. It warrants high-quality transmission component protection, in particular of the synchronizers and the gearings. As a result of the flat viscosity characteristic curve, the oil is suited for applications in all climate zones, particularly in hot and cold regions. Moreover, in comparison with mineral transmission fluids, ZF EcoFluid M helps to reduce fuel consumption by 0.5 up to 1.0%.

Lubricant class	01L	ZF EcoFluid M 01E
<b>Application</b>	<b>Oil and filter change intervals <sup>(2)</sup></b>	
- Off-road operation e.g. mining application - Average speed up to 20 km/h	5.000 h 100.000 km 1 year	10.000 h 200.000 km 2 years <sup>(1)</sup>
- Hot country use <sup>(5)</sup> - Long-distance transport > 44 t - Short-distance transport- Tough operating conditions - Scheduled routes (buses) - Average speed from 20 to 60 km/h	240.000 km 2 years	360.000 km 3 years <sup>(1)</sup>
- Long-distance transport (trucks) - Long-distance coach journeys (buses) - Average speed as of 60 km/h	360.000 km 2 years	540.000 km 3 years <sup>(1)</sup>

**3. Low temperatures limits**

Lubricant classes	Oil type / SAE viscosity grade	Initial vehicle start-up at oilsump temperatures
ZF EcoFluid M, 01E, 01L	75W-80	- 40°C 

## 4. Explanation of footnotes and comments

### Footnotes

- (1) These intervals only apply to a hose breather in a dry area. If there is no hose breather in the dry area, the oil change intervals specified for lubricant class 01L apply. This restriction does not apply to bus applications. In the case of transmissions filled ex-works with lubricant class 01E, no oil change must be effected during the first two years as of initial registration. In case of retrofitting or repair in this period, oil refills with Lubricant Class 01E are permitted. Exception: The limits of application in accordance with the TE-ML 01 (operating hours, mileage [km]) are already met prior to the expiration of the first two years.
- (2) Oil and filter change required, depending on what occurs first. Only use genuine ZF filter inserts.
  - Intarder 2: 6085 298 026
  - Intarder 3: 0501 215 163
  - WSK: 0501 202 378
- (3) First filling: Only the lubricant classes listed are permitted for initial fillings of transmissions. ZF recommends the oil grade listed in Table 1.
- (4) Service filling: The lubricant classes listed are compulsory for service oil changes according to the oil-change intervals mentioned under Section 2. **In case of oil changes at transmission mileage of up to 7 500 km, only oils for initial fillings must be used.** In the case of transmissions filled ex-works with lubricant class 01E, due attention must always be paid to footer 1.
- (5) The denomination „hot country use“ is derived from the area where the vehicle is used, rather than from a country in the sense of a state.  
Regarding ZF units, we say "Hot country use" when:
  1. the monthly average temperature exceeds 25°C in more than 2 months within a year
  2. or if temperatures rise above 40°C on more than 7 days in a year.

### Comments

1. Instructions for transmission ventilation in accordance with Installation Guidelines 1203 765 110 and 1328 765 101 must be followed.
2. A lithium saponified multipurpose grease of NLGI class 2 which is mixable with mineral oil is to be used at greasing points (grease code KP2K-30 in acc. with DIN 51825 or ISO-L-XCCHB2 in accordance with ISO 6743-9).
3. 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.
4. ZF will not assume liability for damage caused by non-observance of our maintenance instructions.

## 5. Lubricant classes and approved trade products

### Lubricant class 01E

We recommend that you use ZF EcoFluid M, a premium oil specially developed for ZF transmissions.

Manufacturer (01E)	Trade name (01E)	ZF approval number
CASTROL LTD, LONDON/GB	CASTROL TRANSMAX MANUAL Z LONG LIFE 75W-80	ZF004761
CEPSA COMERCIAL PETRÓLEO S.A.U., MADRID/ES	CEPSA TRANSMISIONES Z5 FE+LD 75W80	ZF008339
FUCHS PETROLUB SE, MANNHEIM/DE	FUCHS TITAN CYTRAC ULTRA SYNTH SAE 75W-80	ZF008388
HUILES BERLIET S.A., SAINT-PRIEST/FR	RT0 LONGEVIA BZV ECO 75W-80	ZF008323
PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY	TUTELA TRANSMISSION XT-D 540 (SAE 75W-80)	ZF008385
TOTALENERGIES LUBRIFIANTS, NANTERRE/FR	TRAXIUM GEAR 9 FE 75W-80	ZF004874
ZF FRIEDRICHSHAFEN AG, FRIEDRICHSHAFEN/DE	ZF ECOFLUID M SAE 75W-80	ZF002155

## Lubricant class 01L

## Manufacturer (01L)

ADDINOL LUBE OIL GMBH, LEUNA/DE  
 BAYWA AG MÜNCHEN, MÜNCHEN/DE  
 BELGIN MADENI YAGLAR TIC. VE SAN. A.S., KOCAELI/TR  
 CASTROL LTD, LONDON/GB  
 CEPESA 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  
 DE OLIEBRON BV, ZWIJNDRECHT/NL  
 DEUTSCHE ÖLWERKE LUBMIN, LUBMIN/DE  
 DONGFENG COMMERCIAL VEHICLE CO. LTD, HUBEI/CN  
 ENI SUSTAINABLE MOBILITY S.P.A., ROME/IT  
 EUROPART TRADING GMBH, HAGEN/DE  
 EXXONMOBIL CORPORATION, HOUSTON, TX/US  
 FINKE MINERALÖLWERK GMBH, 27374 VISSLHÖVEDE/DE  
 FUCHS PETROLUB SE, MANNHEIM/DE  
 FUCHS PETROLUB SE, MANNHEIM/DE  
 FUCHS PETROLUB SE, MANNHEIM/DE  
 FUCHS PETROLUB SE, MANNHEIM/DE  
 GULF OIL INTERNATIONAL, MUMBAI/IN  
 GULF WESTERN OIL (AUST) PTY LTD, ST MARYS/AU  
 IGOL FRANCE, AMIENS/FR  
 INA MAZIVA LTD., ZAGREB/HR  
 KUWAIT PETROLEUM INTERNATIONAL LUBRICANT, ANTWERP/NL  
 KUWAIT PETROLEUM INTERNATIONAL LUBRICANT, ANTWERP/NL  
 LIQUI MOLY GMBH, ULM/DE  
 LUKOIL LUBRICANTS EUROPE GMBH, VIENNA/AT  
 MEGUIN GMBH & CO. KG, SAARLOUIS/DE  
 MOL-LUB KFT, ALMASFUZITO/HU  
 MOTOREX AG, LANGENTHAL/CH  
 MOTOREX AG, LANGENTHAL/CH  
 OY TEBOIL AB, HELSINKI/FI  
 PAKELO MOTOR OIL S.P.A. A S.U., SAN BONIFACIO (VR)/IT  
 PAZ LUBRICANTS & CHEMICALS, HAIFA/IL  
 PETRO-CANADA LUBRICANTS INC., MISSISSAUGA, ONTARIO/CA  
 PETROCHINA LUBRICANT COMPANY, BEIJING/CN  
 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  
 PHI OIL GMBH, ST. GEORGEN/AT  
 RALYO LUBRICANTES, S.A. DE C.V., SANTIAGO TIANGUISTEN/MX  
 RAVENSBERGER SCHMIERSTOFFVERTRIEB GMBH, WERTHER/DE  
 REPSOL LUBRICANTES Y ESPECIALIDADES, S.A, MADRID/ES  
 ROLF LUBRICANTS GMBH, LEVERKUSEN/DE  
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB  
 SINOPEC LUBRICANT CO., LTD., BEIJING/CN  
 SK ENMOVE CO.,LTD., SEOUL/KR  
 TAMOIL ITALIA SPA, MILANO/IT  
 TONGYI PETROLEUM CHEMICAL CO., LTD., BEIJING/CN  
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR  
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR  
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR  
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR  
 UNIL OPAL, SAUMUR/FR  
 VALVOLINE EUROPE, DORDRECHT/NL  
 VALVOLINE EUROPE, DORDRECHT/NL  
 VIBRA ENERGIA S.A., DUQUE DE CAXIAS/BR  
 WILHELM HOYER B.V. & CO. KG, VISSLHÖVEDE/DE  
 WOLF OIL CORPORATION N.V., HEMIKSEM/BE  
 YACCO SAS, ST PIERRE LES ELBEUF/FR  
 ZELLER+GMELIN GMBH&CO.KG, EISLINGEN/DE  
 ZF FRIEDRICHSHAFEN AG, FRIEDRICHSHAFEN/DE

## Trade name (01L)

ADDINOL GETRIEBEÖL GS 75 W 80 SL  
 TECTROL SYNTOGEAR MA 7580  
 BELGIN LUBEX MITRAS MT EP SYN 75W-80  
 TRANSMAX MANUAL Z 75W-80  
 CEPESA TRANSMISIONES FE+LD 75W-80  
 CHAMPION OEM SPECIFIC 75W80 ZF  
 DELO SYN-MTF XZ 75W-80  
 DELO SYN-MTF XZ 75W-80  
 TOR MT/LD GEAR OIL 75W80  
 AVENO TRUCK GEAR LONGLIFE 75W-80  
 DFCV-HDT 31  
 ENI ROTRA MULTIGEAR 75W-80  
 EUROPART SYNTHOGEAR INT. 75W80  
 MOBIL DELVAC 1 TRANSMISSION FLUID 75W-80  
 AVIATICON FINKOGEAR MTF 75W-80  
 FUCHS TITAN CYTRAC MAN SYNTH SAE 75W-80  
 FUCHS TITAN CYTRAC MAT SAE 75W-80  
 FUCHS TITAN CYTRAC MAT SAE 75W-80  
 FUCHS TITAN CYTRAC MAT SAE 75W-80  
 GULF SYNGEAR FE 75W-80  
 ULTRA SHIFT M SYNTHETIC MANUAL TRANSMISSION FLUID  
 IGOL TRANSGEAR ZF PLUS 75W-80  
 INA TRANSMOL HD SAE 75W-80  
 Q8 GEAR OIL V 75W-80  
 Q8 T 60 NTECH 75W-80  
 LIQUI MOLY TRUCK GETRIEBEÖL HC GL4 SAE 75W-80  
 LUKOIL TRANSMISSION SYNTH MPV 75W-80  
 MEGUOL PREMIUM GETRIEBEOEL HC GL 4 75W80  
 MOL HYKOMOL SYNTRANS 75W80  
 MOTOREX YORK PRISMA TF SAE 75W/80  
 YORK 994  
 TEBOIL GEAR MTF-V  
 GOLDENGear LD PLUS SAE 75W-80  
 PAZ TRANS ULTRA 75W-80  
 TRAXON SYNTHETIC MTF 75W-80  
 KUNLUN ZFGO 02L  
 GALP TRANSVEX TDL ULTRA 75W80  
 MAXIGEAR S 75W-80  
 PETRONAS TUTELA MTF 700 HD 75W-80  
 PETRONAS TUTELA MTF 700 HD 75W-80  
 TUTELA TRANSMISSION FE-GEAR (SAE 75W-80)  
 TUTELA TRANSMISSION FE-GEAR (SAE 75W-80)  
 GEAR OIL MDV SILVER 75W80  
 KRÖNEN TRANSMISSION SYNTHETIC OIL 341 SAE 75W-80  
 RAVENOL SSG SPEC SYNT LKW GETRIEBEÖL 75W-80  
 REPSOL NAVIGATOR FE LL 75W-80  
 ROLF TRANSMISSION S7 GE 75W-80  
 SHELL SPIRAX S6 GXME 75W- 80  
 SINOPEC GREATWALL MTF 02L 75W-80  
 ZIC ZS G-EP HP 75W-80  
 TAMOIL TAMGEAR PLUS SAE 75W-80  
 TONGYI GEAR OIL MTF 75W-80  
 TRAXIUM GEAR 8 FE 75W-80  
 TRANSELF LD 75W-80  
 TRAXIUM GEAR 8 FE 75W-80  
 TRANSELF LD 75W-80  
 GERION LD 75W80  
 VALVOLINE HEAVY DUTY GEAR OIL PRO 75W-80 LD  
 NESTE PRO GEAR 75W-80  
 LUBRAX GOLD XP SAE 75W-80  
 HOYER GEAR F-TF 75W-80  
 WOLF OFFICIALTECH 75W80 ZF  
 BVX Z 1000 75W-80  
 DIVINOL SYNTHOGEAR INT. 75W80  
 ZF ECOFLUID M1

## ZF approval number

ZF008318  
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