



Powershift transmissions, type EcoLife, for buses and trucks

List of lubricants TE-ML 20

Table of contents	Page
1. Vehicle classification	2
2. Approved lubricant classes for EcoLife transmissions	2
3. Oil and filter change intervals	3
3.1 Oil and filter change intervals for city buses as well as trucks used in long-haul and delivery traffic (ZF-EcoLife variants with the final letters B, BS, T, TK, TP, TKP):	3
3.2 Oil and filter change intervals for coaches, transmission type CoachLine ⁽⁵⁾:	4
3.3 Oil and filter change intervals for coaches, transmission type Coach (6AP2300BC):	5
4. Explanation of footnotes and comments	6
5. Lubricant classes and approved trade products	7

The list of lubricants TE-ML 20, **edition 01.10.2026** 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

Disclaimer: The lubricants and providers listed herein are presented solely for the purpose of documenting lubricants that were tested for compatibility with our products. This listing does not constitute an endorsement, recommendation, or preference for any of the mentioned lubricants, manufacturers, or providers. The inclusion of any lubricant in this list does not imply that it is superior to other available options, nor does it indicate that other lubricants or providers are unsuitable for use with our products. There may be additional lubricants, manufacturers, or providers — whether known or unknown to us — that are fully compatible or otherwise appropriate. It remains the sole responsibility of each customer to verify and comply with all applicable sanction laws and regulations prior to purchasing any of the mentioned lubricants.

1. Vehicle classification

EcoLife transmissions are operated under loads and at oil temperatures which vary significantly. Oil releases and oil-change intervals are therefore vehicle-dependent. Consult the owner's manual for your vehicle to check whether TE-ML 20.100, 20.105 or 20.110 applies.

2. Approved lubricant classes for EcoLife transmissions

Product groups	Vehicle classification acc. to owner's manual	Lubricant classes for service fill ⁽¹⁾
EcoLife for city buses <u>EcoLife:</u> 6AP1000B, 6AP1000BS, 6AP1200B, 6AP1200BS, 6AP1400B, 6AP1400BS, 6AP1600BS, 6AP1620B, 6AP1700B, 6AP2000B and accessory bevel-gear variants <u>EcoLife2:</u> 6AP1020B, 6AP1220B, 6AP1420B, 6AP1620B, 6AP1720B, 6AP2020B EcoLife für coaches <u>EcoLife Coach:</u> 6AP2300BC <u>EcoLife CoachLine:</u> 6AP1220C, 6AP1420C, 6AP1620C, 6AP1720C, 6AP2020C, 6AP2320C, 6AP2520C, 6AP2820C EcoLife for trucks ⁽⁴⁾ All ZF-EcoLife variants with the final letters T, TK, TP, TKP	TE-ML 20.100	20B / 20C / 20F / 20G Particularly recommended: ZF EcoFluid Life Plus ⁽²⁾
	TE-ML 20.105	20B / 20C / 20F / 20G Particularly recommended: ZF EcoFluid Life Plus ⁽²⁾
	TE-ML 20.110	20F / 20G Particularly recommended: ZF EcoFluid Life Plus ⁽²⁾

3. Oil and filter change intervals

3.1 Oil and filter change intervals for city buses as well as trucks used in long-haul and delivery traffic (ZF-EcoLife variants with the final letters B, BS, T, TK, TP, TKP):

Table 1: Vehicle classification TE-ML 20.100 (Oil sump temperatures up to 100°C)

Lubricant class ⁽¹⁾	Oil and pressure filter change interval [km/year] ⁽³⁾
20B	60,000 km 1 x year
20C	120,000 km 1 x every 2 years
20F / 20G	240,000 km 1 x every 4 years

Table 2: Vehicle classification TE-ML 20.105 (Oil sump temperatures up to 105°C)

Lubricant class ⁽¹⁾	Oil and pressure filter change interval [km/year] ⁽³⁾
20B	60,000 km 1 x year
20C	120,000 km 1 x every 2 years
20F / 20G	180,000 km 1 x every 3 years

Table 3: Vehicle classification TE-ML 20.110 (Oil sump temperatures up to 110°C)

Lubricant class ⁽¹⁾	Oil and pressure filter change interval [km/year] ⁽³⁾
20F / 20G	120,000 km 1 x every 3 years

3.2 Oil and filter change intervals for coaches, transmission type CoachLine ⁽⁵⁾:**Table 1: Vehicle classification TE-ML 20.100 (Oil sump temperatures up to 100°C)**

Lubricant class ⁽¹⁾	Oil and pressure filter change interval [km/year] ⁽³⁾
20B	180,000 km 1 x year
20C	240,000 km 1 x every 2 years
20F / 20G	480,000 km 1 x every 4 years

Table 2: Vehicle classification TE-ML 20.105 (Oil sump temperatures up to 105°C)

Lubricant class ⁽¹⁾	Oil and pressure filter change interval [km/year] ⁽³⁾
20B	180,000 km 1 x year
20C	240,000 km 1 x every 2 years
20F / 20G	360,000 km 1 x every 3 years

Table 3: Vehicle classification TE-ML 20.110 (Oil sump temperatures up to 110°C)

Lubricant class ⁽¹⁾	Oil and pressure filter change interval [km/year] ⁽³⁾
20F / 20G	240,000 km 1 x every 3 years

3.3 Oil and filter change intervals for coaches, transmission type Coach (6AP2300BC):**Table 1: Vehicle classification TE-ML 20.100 (Oil sump temperatures up to 100°C)**

Lubricant class ⁽¹⁾	Oil and pressure filter change interval [km/year] ⁽³⁾
20B	120,000 km 1 x year
20C	180,000 km 1 x every 2 years
20F / 20G	300,000 km 1 x every 4 years

Table 2: Vehicle classification TE-ML 20.105 (Oil sump temperatures up to 105°C)

Lubricant class ⁽¹⁾	Oil and pressure filter change interval [km/year] ⁽³⁾
20B	120,000 km 1 x year
20C	180,000 km 1 x every 2 years
20F / 20G	240,000 km 1 x every 3 years

Table 3: Vehicle classification TE-ML 20.110 (Oil sump temperatures up to 110°C)

Lubricant class ⁽¹⁾	Oil and pressure filter change interval [km/year] ⁽³⁾
20F / 20G	180,000 km 1 x every 3 years

4. Explanation of footnotes and comments

- (1) Refer to the following pages for approved commercial products and oil change intervals.
- (2) ZF EcoFluid Life Plus was specifically developed as a fuel economy oil for use in modern ZF automatic transmissions for commercial vehicles. The combination of high-quality base oils (API Group III and higher) with a specially balanced additive package provides excellent oxidation stability and a consistent coefficient of friction. This oil is explicitly recommended for applications involving higher loads such as demanding topography or frequent retarder operation.
- The optimum transmission-adapted viscosity which remains stable throughout its service life as well as additives optimized for the application guarantee superior protection and extend the service lives of bearings and gears. Moreover, ZF EcoFluid Life Plus features a flat viscosity-temperature characteristic curve and is therefore particularly suited for applications in both cold and hot climatic regions.
- (3) Oil and filter change required, depending on what occurs first. Only use ZF original filter inserts (ZF order no.: 4181 298 002, for ZF CoachLine: 4193 298 001). Mix the oil thoroughly before removing it from the container. To ensure proper breathing of the transmission, the breather must be checked during the 3-monthly oil level check and cleaned or replaced if necessary.
- When switching for the first time from an ATF of a lower lubricant class to a higher lubricant class with a longer oil change interval, an intermediate oil change is required after <60,000 km or a maximum of one year. Alternatively, after a short period of operation, a second oil change or a rinsing process with the higher-quality oil can be carried out; in this case, the intermediate oil change is not required.
- The vehicle classification (temperature release class) determined by the OEM may be exceeded for a maximum of 5% of the operating time, and this amount of percentage exceedance may only occur in the next higher temperature release class. The next higher class must be applied as of >5%. The maximum oil sump temperature can be taken as a reference from the respective vehicle manufacturer's documents; however, the temperatures actually measured in the transmission are decisive for classification.
- Oil sump temperatures above 115°C are generally not permissible. In demanding ambient or operating conditions, it is recommended to regularly monitor the actual temperature duty cycle using the ZF diagnostic tool.
- (4) For information on oil and filter change intervals for special vehicles and stationary applications (ZF-EcoLife variants with the final letters E, EK, EP, EKP, S, SP, SK or SKP), please refer to the List of Lubricants TE-ML 25.
- (5) ZF-EcoLife variants type CoachLine with the final letter C, except 6AP2300BC. For oil change intervals for 6AP2300BC transmission refer to section 3.3.

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.

5. Lubricant classes and approved trade products

Lubricant class 20B

Manufacturer (20B)

ADDINOL LUBE OIL GMBH, LEUNA/DE
 BELGIN MADENI YAGLAR TIC. VE SAN. A.S., KOCAELI/TR
 CHEVRON LUBRICANTS, SAN RAMON, CA/US
 CITGO PETROLEUM CORPORATION, HOUSTON/US
 COMERCIAL ROSHFRANS, S.A. DE C.V., MEXICO, D.F./MX
 ENILIVE S.P.A., ROME/IT
 ENILIVE S.P.A., ROME/IT
 HUILES BERLIET S.A., SAINT-PRIEST/FR
 INA MAZIVA LTD., ZAGREB/HR
 LAEMMLE CHEMICALS AG, MADETSWIL/CH
 LUKOIL LUBRICANTS EUROPE GMBH, VIENNA/AT
 MABANOL GMBH & CO. KG, HAMBURG/DE
 MOEVE CLIENT SOLUTIONS, S.A.U., MADRID/ES
 MOL-LUB KFT, ALMASFUZITO/HU
 ORLEN OIL SP. Z O.O., KRAKOW/PL
 PAKELO MOTOR OIL S.P.A. A S.U., SAN BONIFACIO (VR)/IT
 PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY
 PHI OIL GMBH, ST. GEORGEN/AT
 RALOY LUBRICANTES, S.A. DE C.V., SANTIAGO TIANGUISTEN/MX
 RAVENSBERGER SCHMIERSTOFFVERTRIEB GMBH, WERTHER/DE
 REPSOL LUBRICANTES Y ESPECIALIDADES, S.A, MADRID/ES
 REPSOL LUBRICANTES Y ESPECIALIDADES, S.A, MADRID/ES
 ROWE MINERALÖLWERK GMBH, WORMS/DE
 SINOPEC LUBRICANT CO., LTD., BEIJING/CN
 SINOPEC LUBRICANT CO., LTD., BEIJING/CN
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE
 TONGYI PETROLEUM CHEMICAL CO., LTD., BEIJING/CN
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
 UNITED OIL COMPANY PTE LTD, SINGAPORE/SG
 VALVOLINE GLOBAL PRODUCTS, LEXINGTON/US
 VIBRA ENERGIA S.A., DUQUE DE CAXIAS/BR

Trade name (20B)

ADDINOL ATF XN 5
 BELGIN LUBEX MITRAS ATF HD III
 DELO SYN ATF HD
 CITGO QUATRASYN SYNTHETIC TRANSMISSION FLUID
 ATF ALLPOWER MULTIVEHICULOS
 ENI ROTRA ATF II E
 ENI ROTRA ATF MULTI
 RTO STARMATIC S3
 INA ATF DX IIIH
 ROXOR ATF SUPER VTX
 LUKOIL ATF SYNTH MULTI
 MABANOL RADON GEAR ATF III MV
 CEPSA ATF 3000 S
 MOL ATF SYNT 3H
 HIPOL ATF II E
 ATF XT III FLUID
 PETRONAS TUTELA ATF 700 HD
 ATF D3 GOLD
 TRANSFLUID SYNTHETIC M-5
 RAVENOL DEXRON III H
 REPSOL MATIC III
 REPSOL AUTOMATOR ATF III
 ROWE HIGHTEC ATF 9000
 SINOPEC GREATWALL ATF HD S
 SINOPEC GREATWALL ATF HD
 SRS WIOLIN ATF III MV
 LINGXIAN 6+ AUTOMATIC TRANSMISSION FLUID
 FLUIDMATIC XLD FE
 UNITED MV 99
 SYN GARD™ ATF ES
 LUBRAX ATF HD

ZF approval number

ZF004911
 ZF011973
 ZF001664
 ZF003690
 ZF000385
 ZF000951
 ZF003452
 ZF008343
 ZF002314
 ZF011929
 ZF012149
 ZF004879
 ZF000386
 ZF001895
 ZF003623
 ZF001177
 ZF003627
 ZF003507
 ZF001025
 ZF001609
 ZF000318
 ZF008281
 ZF001937
 ZF003346
 ZF003348
 ZF002061
 ZF003377
 ZF008244
 ZF003562
 ZF003710
 ZF002120

Lubricant class 20C**Manufacturer (20C)**

ADDINOL LUBE OIL GMBH, LEUNA/DE
 ALLEGHENY PETROLEUM, WILMERDING, PA/US
 BASF SE, LUDWIGSHAFEN/DE
 BELGIN MADENI YAGLAR TIC. VE SAN. A.S., KOCAELI/TR
 CASTROL LTD, LONDON/GB
 CASTROL LTD, LONDON/GB
 CASTROL LTD, LONDON/GB
 CHAMPION CHEMICALS N.V., HEMIKSEM/BE
 ENILIVE S.P.A., ROME/IT
 EXOL LUBRICANTS LTD, WEDNESBURY/GB
 EXXONMOBIL CORPORATION, HOUSTON, TX/US
 FUCHS SE, MANNHEIM/DE
 FUCHS SE, MANNHEIM/DE
 GULF WESTERN OIL (AUST) PTY LTD, ST MARYS/AU
 H. BANTLEON GMBH / GESELLS. D. AVIA, ULM/DE
 HI-TEC OILS, SMITHFIELD/AU
 JOHN DEERE, MOLINE, ILLINOIS/US
 KUWAIT PETROLEUM (BELGIUM) N.V., ANTWERP/BE
 LIQUI MOLY GMBH, ULM/DE
 LUKOIL LUBRICANTS EUROPE GMBH, VIENNA/AT
 LUKOIL LUBRICANTS EUROPE GMBH, VIENNA/AT
 MOEVE CLIENT SOLUTIONS, S.A.U., MADRID/ES
 MOL-LUB KFT, ALMASFUZITO/HU
 MOTOREX AG, LANGENTHAL/CH
 MOTOREX AG, LANGENTHAL/CH
 MOTUL SA, AUBERVILLIERS/FR
 PAKELO MOTOR OIL S.P.A. A S.U., SAN BONIFACIO (VR)/IT
 PETRO-CANADA LUBRICANTS INC., MISSISSAUGA, ONTARIO/CA
 PETRO-CANADA LUBRICANTS INC., MISSISSAUGA, ONTARIO/CA
 PETROGAL S.A., LISBOA/PT
 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
 S.I.R.A.L. SPA, NOLA NAPOLI/IT
 SASOL ENERGY, JOHANNESBURG/ZA
 SINOPEC LUBRICANT CO., LTD., BEIJING/CN
 SINOPEC LUBRICANT CO., LTD., BEIJING/CN
 TAMOIL ITALIA S.P.A., MILANO/IT
 TEDEX S.A., LUBOCHNIA/PL
 TONGYI PETROLEUM CHEMICAL CO., LTD., BEIJING/CN
 WOLF OIL CORPORATION N.V., HEMIKSEM/BE

Trade name (20C)

ADDINOL ATF XN HD
 ALTRA SHL EXTENDED DRAIN ZF 20C
 EMGARD 2805
 BELGIN LUBEX MITRAS ATF SYN ULTRA
 CASTROL TRANSYND
 CASTROL TRANSMAX ATF Z
 TES-295 SYN TRANSMISSION FLUID
 CHAMPION OEM SPECIFIC MULTI VEHICLE ATF HD-LD
 ENI ROTRA ATF HD PLUS
 AUTOTRANS ELC
 MOBIL DELVAC 1 ATF
 TRANSWAY ATF ULTRA
 FUCHS TITAN ATF 5500
 SYN-TS® ZFV
 AVILUB FLUID ATZ 295
 MULTITRANS PLUS ATF
 HD SYNTHETIC TRANSMISSION FLUID
 Q8 AUTO 15 S
 LIQUI MOLY TOP TEC ATF 1700
 LUKOIL ATF SYNTH MN Z3
 TEBOIL FLUID ES-MAX
 CEPESA ATF 4000 S
 MOL ATF 295
 YORK 886
 MOTOREX_YORK ATF VZ
 MOTUL ATF HD
 ATF XT III FLUID PLUS
 DURADRIVE HD LONG DRAIN ATF
 DURADRIVE HD LONG DRAIN ATF
 GALP TRANSMATIC Z
 TUTELA ATF 900 HD
 ATF CE GOLD
 REPSOL MATIC SINTETICO
 REPSOL AUTOMATOR ATF 14C
 SIROIL ATF MAXIMUM
 SYN TRANSMISSION OIL VI
 SINOPEC GREATWALL SYNTHETIC ATF HD
 SINOPEC GREATWALL FULLY SYNTHETIC ATF HD S
 TAMOIL ATF LONG LIFE HD
 TEDEX ATF SYNTHETIC (S)
 LINGXIAN 10+ AUTOMATIC TRANSMISSION FLUID
 WOLF OFFICIALTECH MULTI VEHICLE ATF HD-LD

ZF approval number

ZF004913
 ZF001756
 ZF003370
 ZF008386
 ZF000226
 ZF002158
 ZF002298
 ZF007147
 ZF012234
 ZF001685
 ZF001827
 ZF001330
 ZF001797
 ZF004900
 ZF002288
 ZF001669
 ZF004851
 ZF001635
 ZF006000
 ZF009451
 ZF012153
 ZF006058
 ZF003361
 ZF004907
 ZF006107
 ZF003587
 ZF001748
 ZF004791
 ZF012280
 ZF001893
 ZF005936
 ZF012277
 ZF003586
 ZF008282
 ZF003709
 ZF001091
 ZF003347
 ZF003345
 ZF001672
 ZF002213
 ZF003378
 ZF006128

Lubricant class 20F

Manufacturer (20F)	Trade name (20F)	ZF approval number
PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY	TUTELA TRANSMISSION ATF 120	ZF000053
SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB	SHELL SPIRAX S6 ATF ZM	ZF006080
ZF FRIEDRICHSHAFEN AG, FRIEDRICHSHAFEN/DE	ZF ECOFLUID A LIFE	ZF001671

Lubricant class 20G**Manufacturer (20G)**

PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY
TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
ZF FRIEDRICHSHAFEN AG, FRIEDRICHSHAFEN/DE

Trade name (20G)

TUTELA ATF 360
FLUIDMATIC HD XLD
ZF ECOFLUID LIFE PLUS

ZF approval number

ZF010825
ZF011911
ZF001719