



Transmissions and axles for lift-trucks

List of lubricants TE-ML 17

Table of contents

Page

1. Approved lubricant classes	1
2. Low temperatures limits	2
3. Explanation of footnotes and comments	2
4. Lubricant classes and approved trade products	3







1. Approved lubricant classes

Product group	Lubricant classes for service fills ⁽¹⁾
Spur-bevel gear drives GRP8, HFK 100-600, GK20LD, GK25LD, GK40	17A / 17B / 17H
- Turntable bearing GRP8, HFK 100-600, GK20LD, GK25LD, GK40	grease Shell Alvania RL3 ⁽²⁾
Splined shaft connection GK16, GK20, GK25, GK26LD, GK30, GK40	17K
Spur-bevel gear drives GK10, GK16, GK20, GK25, GK26LD, GK30	17B / 17H
Planetary gear transmissions GR10	transmission grease Esso Unirex N2
Helical gear drive HFD 80	low-viscosity grease for gears Klüber Mikrolube GB 00 transmission grease Klübersynth GE46-1200 ⁽⁴⁾
Electrical power steering EPS3 - Transmission - Wheel hub	low-viscosity grease for gears Total MULTIS EP 00 grease Shell Alvania RL3 ⁽²⁾
Planetary gear transmissions HFS 502, HFS 507, GP18, GP20	17C
Planetary gear transmissions GP21, GP23, GP25	17C
Planetary gear transmissions GP25 without brake	17A / 17H
Planetary gear transmissions GP19, GP27, GP35	17E / 17G
Planetary gear transmissions HFP 10, HFP 10A	grease Shell Alvania RL3 ⁽²⁾
Planetary gear transmissions HFP 20, HFP 40, HFP 50, GR50	17A / 17B / 17H
Axles PR61S, PR20MO, PR40MO, P16MO	17B / 17H
WG 80, WG 81, WG 85, WG 86	refer to TE-ML 03 ⁽³⁾
- attached axles	17B / 17H
Axles AT30	17E / 17G
Axles AT35	17E ⁽⁵⁾ / 17F / 17G ⁽⁵⁾
Axles GPA35	Transmission: 17H; Multidisk brake: 17C

The list of lubricants TE-ML 17, **edition 01.04.2024** 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

2. Low temperatures limits

Lubricant classes	Oil type / viscosity grades	Initial vehicle start-up at oil sump temperatures
17C	- ATF	- 40°C 
17A, 17B	- SAE 75W-80, 75W-85, 75W-90	- 40°C 
17E, 17F, 17G	- SAE 10W-30, 10W-40, other	- 35°C 
17A, 17B, 17E, 17H	- SAE 80, 80W-85, 80W-90, 20W-40	- 26°C 
17A, 17B, 17H	- SAE 85W-90	- 12°C 
17A, 17B, 17H	- SAE 90	-5°C 

3. Explanation of footnotes and comments

Footnotes

- (1) **Refer to the following pages for approved commercial products.**
- (2) Other saponified lithium mineral oil-based multigrade greases of the NLGI class 3 may be used alternatively (grease code KP2K-30 in accordance with DIN 51825 or ISO-L-XCCHB2 in accordance with ISO 6743-9).
- (3) The current list TE-ML 03 can be requested from any ZF after-sales service center or accessed on the Internet under www.zf.com/lubricants.
- (4) For refrigerated warehouse use only.
- (5) The lubricant classes 17E and 17G apply for service oil changes and may only be used with run-in axle as of a total vehicle operation performance of 1,500h. During the axle run-in process (total vehicle operation of 0 up to 1,500 km) only oil of the lubricant class 17F must be used.

Comments

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).

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.

Manufacturer (17A)

TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
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
VIBRA ENERGIA S.A., DUQUE DE CAXIAS/BR
VIBRA ENERGIA S.A., DUQUE DE CAXIAS/BR
VIBRA ENERGIA S.A., DUQUE DE CAXIAS/BR
YPF S.A., BUENOS AIRES/AR

Trade name (17A)

TRANSELF EP 80W
TRAXIUM GEAR 7 80W-85
TRANSELF EP 80W
TRAXIUM GEAR 7 80W-85
TRAXIUM GEAR 7 85W-90
TRAXIUM GEAR 7 85W-90
TRANSELF EP 80W-90
TRANSELF EP 80W-90
GEAR EP 80W
GEAR EP 80W-90
LUBRAX TRM 4 SAE 90
LUBRAX TRM 4 SAE 80W
LUBRAX TRM 4 SAE 90
HELICOIDAL M (80W)

ZF approval number

ZF008213
ZF008214
ZF008215
ZF008217
ZF008222
ZF008223
ZF008381
ZF008382
ZF000377
ZF007161
ZF001477
ZF006102
ZF006103
ZF000657

Lubricant class 17C

Manufacturer (17C)

ACPA, ALEXANDRIA/EG
 ADDINOL LUBE OIL GMBH, LEUNA/DE
 ADDINOL LUBE OIL GMBH, LEUNA/DE
 ADDINOL LUBE OIL GMBH, LEUNA/DE
 AVISTA OIL DEUTSCHLAND GMBH, UETZE/DE
 AVISTA OIL DEUTSCHLAND GMBH, UETZE/DE
 BAYWA AG MÜNCHEN, MÜNCHEN/DE
 BAYWA AG MÜNCHEN, MÜNCHEN/DE
 CEPESA COMERCIAL PETRÓLEO S.A.U., MADRID/ES
 CEPESA COMERCIAL PETRÓLEO S.A.U., MADRID/ES
 CHEVRON LUBRICANTS, SAN RAMON, CA/US
 CHEVRON LUBRICANTS, SAN RAMON, CA/US
 CHEVRON LUBRICANTS, SAN RAMON, CA/US
 COMERCIAL ROSHFANS, S.A. DE C.V., MEXICO, D.F./MX
 ELLIS ENTERPRISES EAST D.O.O. KRUSEVAC, KRUŠEVAC/RS
 ENI SUSTAINABLE MOBILITY S.P.A., ROME/IT
 EXXONMOBIL CORPORATION, HOUSTON, TX/US
 EXXONMOBIL CORPORATION, HOUSTON, TX/US
 EXXONMOBIL CORPORATION, HOUSTON, TX/US
 FUCHS PETROLUB SE, MANNHEIM/DE
 FUCHS PETROLUB SE, MANNHEIM/DE
 HILL CORPORATION, SHYMKENT/KZ
 INA MAZIVA LTD., ZAGREB/HR
 INA MAZIVA LTD., ZAGREB/HR
 INA MAZIVA LTD., ZAGREB/HR
 INA MAZIVA LTD., ZAGREB/HR
 KUWAIT PETROLEUM INTERNATIONAL LUBRICANT, ANTWERP/NL
 LIQUI MOLY GMBH, ULM/DE
 LIQUI MOLY GMBH, ULM/DE
 LIQUI MOLY GMBH, ULM/DE
 MEGUIN GMBH & CO. KG, SAARLOUIS/DE
 MOL-LUB KFT, ALMASFUZITO/HU
 MOL-LUB KFT, ALMASFUZITO/HU
 MOL-LUB KFT, ALMASFUZITO/HU
 MORRIS LUBRICANTS, SHREWSBURY/GB
 MOTOREX AG, LANGENTHAL/CH
 ORLEN OIL SP. Z O.O., KRAKOW/PL
 ORLEN S.A., GDANSK/PL
 OY TEBOL AB, HELSINKI/FI
 PAKELO MOTOR OIL S.P.A. A S.U., SAN BONIFACIO (VR)/IT
 PAKELO MOTOR OIL S.P.A. A S.U., SAN BONIFACIO (VR)/IT
 PETRO-CANADA LUBRICANTS INC., MISSISSAUGA, ONTARIO/CA
 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
 REPSOL LUBRICANTES Y ESPECIALIDADES, S.A, MADRID/ES
 REPSOL LUBRICANTES Y ESPECIALIDADES, S.A, MADRID/ES
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB
 SINOPEC LUBRICANT CO., LTD., BEIJING/CN
 SINOPEC LUBRICANT CO., LTD., BEIJING/CN
 SPECOL SP. Z O.O., CHORZOW/PL
 TEDEX S.A., WARSZAWA/PL
 TALENERGIES LUBRIFIANTS, NANTERRE/FR
 TALENERGIES LUBRIFIANTS, NANTERRE/FR
 TALENERGIES LUBRIFIANTS, NANTERRE/FR
 TALENERGIES LUBRIFIANTS, NANTERRE/FR
 VALVOLINE GLOBAL PRODUCTS, LEXINGTON/US
 VIBRA ENERGIA S.A., DUQUE DE CAXIAS/BR
 ZELLER+GMELIN GMBH&CO.KG, EISLINGEN/DE
 ZF FRIEDRICHSHAFEN AG, FRIEDRICHSHAFEN/DE

Trade name (17C)

ACPA DEX-IIIH
 ADDINOL ATF D II D
 ADDINOL ATF XN 2
 ADDINOL ATF XN 3
 AVISTA PEER EVO ATF 3000
 AVISTA PEER EVO ATF 2000
 TECTROL ATF 3000
 TECTROL ATF 4000
 CEPESA ATF 3000 S
 CEPESA ATF 2000S
 TEXAMATIC 4291
 DELO SYN ATF HD
 HAVOLINE MULTI-VEHICLE ATF
 ATF ALLPOWER MULTIVEHICULOS
 VALVOLINE HEAVY DUTY ATF D-II
 ENI ROTRA ATF II E
 MOBIL ATF 320
 MOBIL ATF LT 71141
 MOBIL ATF 320
 FUCHS TITAN ATF 5005
 FUCHS TITAN ATF 1
 FASTROIL ATF 3
 INA ATF SUPER
 INA ATF DX III
 INA ATF DX IID
 INA ATF DX IIH
 Q8 AUTO Z3D
 LIQUI MOLY TOP TEC ATF 1100
 LIQUI MOLY MARINE ATF
 LIQUI MOLY ATF III
 MEGOL TRANSMISSION-FLUID ATF III
 MOL ATF
 MOL ATF SYNT 3H
 MOL ATF SYNT
 MULTITRANS ACV
 MOTOREX YORK ATF TP
 HIPOL ATF II E
 LOTOS ATF SUPER III G
 TEBOL FLUID E
 AUXON II E
 ATF XT III FLUID
 DURADRIVE HD SYNTHETIC BLEND ATF
 GALP TRANSMATIC D III
 ATF DX-3
 TUTELA TRANSMISSION GI/E
 PETRONAS TUTELA ATF 500 HD
 PETRONAS TUTELA ATF 500 HD
 REPSOL MATIC III
 REPSOL AUTOMATOR ATF III
 SHELL SPIRAX S6 ATF VM PLUS
 SPIRAX S4 ATF HDX
 SINOPEC GREATWALL ATF III LD
 SINOPEC GREATWALL ATF HD
 HIPOSPEC ATF IID
 TEDEX ATF III
 FLUIDMATIC D2
 ELFMATIC D2
 FLUIDMATIC D2
 ELFMATIC D2
 SYN GARD™ ATF ES
 LUBRAX ATF HD
 DIVINOL ATF SPEZIAL R
 ZF LIFEGUARDFLUID 5

ZF approval number

ZF004823
 ZF000698
 ZF003702
 ZF004910
 ZF004774
 ZF004775
 ZF004798
 ZF004799
 ZF000386
 ZF002040
 ZF001574
 ZF001664
 ZF001714
 ZF000385
 ZF008168
 ZF000951
 ZF000043
 ZF000044
 ZF006088
 ZF000717
 ZF003602
 ZF003429
 ZF000248
 ZF000390
 ZF000392
 ZF002314
 ZF003726
 ZF004926
 ZF004927
 ZF004928
 ZF004922
 ZF001251
 ZF001895
 ZF004917
 ZF002268
 ZF006045
 ZF003623
 ZF000620
 ZF003321
 ZF000048
 ZF001177
 ZF004790
 ZF001425
 ZF001667
 ZF000481
 ZF003635
 ZF004757
 ZF000318
 ZF008281
 ZF001371
 ZF001812
 ZF001360
 ZF003348
 ZF003354
 ZF001350
 ZF006067
 ZF006068
 ZF006069
 ZF010594
 ZF003710
 ZF002120
 ZF009444
 ZF001363

Manufacturer (17E)

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
 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
 VIBRA ENERGIA S.A., DUQUE DE CAXIAS/BR
 WOLF OIL CORPORATION N.V., HEMIKSEM/BE

Trade name (17E)

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 UNITRACTOR SAE 10W-30
 LUBRAX UNITRACTOR 10W-30
 WOLF TRACTOFLUID 170 BM

ZF approval number

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
 ZF010660
 ZF005951

Lubricant class 17F

Manufacturer (17F)

ADDINOL LUBE OIL GMBH, LEUNA/DE

Trade name (17F)

ADDINOL UTTO SPEZIAL

ZF approval number

ZF000635

Lubricant class 17G

Premium universal axle and transmission oil

Manufacturer (17G)

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

Trade name (17G)

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

ZF approval number

ZF002162
ZF002087
ZF005995

Lubricant class 17H**Manufacturer (17H)**

ADDINOL LUBE OIL GMBH, LEUNA/DE
 AVISTA OIL DEUTSCHLAND GMBH, UETZE/DE
 AVISTA OIL DEUTSCHLAND GMBH, UETZE/DE
 BAYWA AG MÜNCHEN, MÜNCHEN/DE
 BLASER SWISSLUBE AG, HASLE-RÜEGSAU/CH
 CASTROL LTD, LONDON/GB
 CHEVRON LUBRICANTS, SAN RAMON, CA/US
 ELLIS ENTERPRISES EAST D.O.O. KRUSEVAC, KRUŠEVAC/RS
 EXXONMOBIL CORPORATION, HOUSTON, TX/US
 FINKE MINERALÖLWERK GMBH, 27374 VISSLHÖVEDE/DE
 FUCHS PETROLUB SE, MANNHEIM/DE
 GEORG OEST MINERALÖLWERK GMBH & CO.KG, FREUDENSTADT/DE
 GULF OIL INTERNATIONAL, MUMBAI/IN
 INA MAZIVA LTD., ZAGREB/HR
 KUWAIT PETROLEUM INTERNATIONAL LUBRICANT, ANTWERP/NL
 LAEMMLE CHEMICALS AG, MADETSWIL/CH
 LIQUI MOLY GMBH, ULM/DE
 MEGUIN GMBH & CO. KG, SAARLOUIS/DE
 MOTOREX AG, LANGENTHAL/CH
 OPET FUCHS MADENI YAG. SAN. VE TIC. A.S., IZMIR/TR
 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
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB
 SINOPEC LUBRICANT CO., LTD., BEIJING/CN
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
 ZF FRIEDRICHSHAFEN AG, FRIEDRICHSHAFEN/DE

Trade name (17H)

ADDINOL GETRIEBEÖL GX 80W-90 ML
 AVISTA PEER EVO GL4/GL5 SAE 80W-90
 AVISTA PEER EVO PRIME GL4/GL5 SAE 80W-90
 TECTROL MULTIGEAR PLUS 8090
 EVOLCA BGP 80W90
 CASTROL TRANSMAX UNIVERSAL LL 80W-90
 DELO GEAR TDL 80W-90
 MULTIHIPO 80W-90 F PLUS
 MOBILUBE S 80W-90
 AVIATICON FINKOGEAR SUPER 80W-90
 FUCHS TITAN SUPERGEAR MC SAE 80W-90
 OEST GETRIEBEÖL FE SAE 80W-90 GL4/5
 GULF GEAR TDL 80W-90
 INA HIPENOL TDL 80W-90
 Q8 GEAR OIL XG SAE 80W-90
 ROXOR TOPGEAR 80W-90
 LIQUI MOLY HYPOID GETRIEBEÖL TDL SAE 80W-90
 MEGOL HYPOID-GETRIEBEOEL TDL 80W-90
 MOTOREX YORK GEAR ZX TP SAE 80W/90
 OTOKAR SPECTRA DO Z 80W-90
 PLATINUM GEAR LL 80W-90
 ORLEN OIL GEAR LL 80W-90
 TITANIS SUPER GL-5 80W-90
 TEBOIL HYPOID SAE 80W-90
 SHELL SPIRAX S3 AM 80W-90
 SINOPEC MULTIPURPOSE-II GEAR OIL 80W-90
 SRS GETRIEBEFLUID SML 80W-90
 TRAXIUM DUAL 8 FE 80W-90
 ZF ECOFLUID X SAE 80W-90

ZF approval number

ZF000672
 ZF004780
 ZF004797
 ZF001160
 ZF004735
 ZF002143
 ZF002273
 ZF001456
 ZF000776
 ZF002299
 ZF000722
 ZF000565
 ZF000780
 ZF000432
 ZF002103
 ZF010966
 ZF001323
 ZF001183
 ZF006006
 ZF004755
 ZF000311
 ZF011188
 ZF001098
 ZF001970
 ZF001292
 ZF003332
 ZF000447
 ZF004817
 ZF001266

Lubricant class 17K

Pastes for drive pinion-motor shaft connection

Manufacturer	Trade name
Castrol	Molub-Alloy Paste White T
DuPont	MOLYKOTE® G-N PLUS Solid Lubricant Paste
DuPont	MOLYKOTE® Cu-7439 Plus Paste V1 *)

*) preferred