



Transmissions for off-road equipment (off-road vehicles, special vehicles, lift truck)

List of lubricants TE-ML 03

1. Approved lubricant classes

Product group	Lubricant classes for service fills (1)
WG WG 80, 81, 83, 85, 86 WG 92, 98, 100 WG 120, 121, 150, 151 WG 180, 181, 200, 201 WG 250, 251 WG 65 HN 500 PW 45H ERGOPOWER WG 110	03A, 03E, 03G, 03H, 03K only at ambient temperatures below - 10°C: 03D, 03F Special approvals after consultation with ZF.
ERGOPOWER WG 115, 116, 130, 131, 160, 161, 171, 190, 191, 210, 211, 260, 261, 310, 311	03A, 03B, 03C, 03D, 03E, 03G, 03H, 03K only at ambient temperatures below - 10°C: 03F
ERGOPOWER EP 320, 370, 420, 470, 520	03A, 03B, 03C, 03H, 03K
WG 90, WG 94 (Separated oil supply transmission and axle)	03A, 03E, 03G, 03H, 03K only at ambient temperatures below - 30°C: 03D, 03F
WG 94 + MT-F 3065 / MT-F 3070 (Shared oil supply transmission and axle)	03E, 03G
WG 92 S4	03A, 03K JOHN DEERE, Waterloo/USA: HY-GARD only at ambient temperatures below - 10°C: 03F
cPOWER CP 190, 210, 230, 260, 290, 310, 330	03G, 03L
Transfer box TB92-432, TB92C-432, TB92-280 I3, TB92-430 I4	03E, 03G, 03H

(1) Refer to the following pages for approved commercial products and low temperature limits.

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.

Note low-temperature limits and oil change intervals on page 2!

The list of lubricants TE-ML 03, **Edition 01.04.2014** 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.

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 D-88038 Friedrichshafen
 phone: + 49 7541 77 7853
 fax: + 49 7541 77 7319

2. Oil change intervals

Lubricant class	03A, 03B, 03C, 03D, 03E, 03F, 03H, 03K, 03L	03G
Load class	Oil change interval	
1	1500 h	2000 h
2	1000 h	1500 h

3. Load classes

Load class	Examples of applications
1	- normal operation
2	- frequent reversing/retarder operation

4. Low temperatures limits

Lubricant classes	Oil type / viscosity grades	Use at outside temperatures above	
		WG / WG 92 S4 / TB	ERGOPOWER WG 90 / WG 94 / cPOWER
03D	- ATF	- 30°C	- 40°C
03F	- UTTO in accordance with JDM J20D / John Deere Low Viscosity Hy-Gard	- 30°C	- 40°C
03E, 03G, 03H, 03L	- UTTO	- 20°C	- 30°C
03K	- SAE 0W-30, 0W-40	- 30°C	- 40°C
03B, 03C, 03K	- SAE 5W-30, 5W-40	- 25°C	- 35°C
03A, 03B, 03C, 03K	- SAE 10W, 10W-30, 10W-40	- 20°C	- 30°C
03A, 03C, 03K	- SAE 15W-30, 15W-40	- 15°C	- 25°C
03A, 03C, 03K	- SAE 20W-20, 20W-40	- 10°C	- 20°C
03A, 03C, 03K	- SAE 30	- 5°C	- 10°C

5. Lubricant classes and approved trade products

Lubricant class 03A

Engine oil

(API CD/CE/CF-4/CF/CG-4/CH-4/CI-4/SF/SG/SH/SJ/SL or ACEA, categories A, B, E)

Viscosity grades: SAE 20W-20 / 30 / 10W-30 / 10W-40 / 15W-30 / 15W-40 / 20W-40

Base oil API Group 1 / 2 / 3

Note:

All engine oils which satisfy the above specifications may be used. There will be no product listing.

Oils of the API CI-4 Plus, CJ-4, SM, or ACEA specification, category E9 (also in combination with the above mentioned specifications) are not permitted for this lubricant class. Oils of these specifications are listed in the 03K lubricant class.

Lubricant class 03B

Engine oil

(API CD/CE/CF-4/CF/CG-4/CH-4/CI-4/SF/SG/SH/SJ/SL or ACEA, categories A, B, E)

Viscosity grades: SAE 10W / 5W-30 / 5W-40

Oils of the API CI-4 Plus, CJ-4, SM, or ACEA specification, category E9 (also in combination with the above mentioned specifications) are not permitted for this lubricant class. Oils of these specifications are listed in the 03K lubricant class.

Manufacturer (03B)

GS CALTEX CORPORATION, SEOUL/KR

KUWAIT PETROLEUM INTERNATIONAL LUBRICANT, ANTWERP/NL

KUWAIT PETROLEUM INTERNATIONAL LUBRICANT, ANTWERP/NL

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

Trade name (03B)

DOOSAN DX 10W

Q8 T 400 SAE 10W

Q8 T 520 SAE 10W

AKCELA ENGINE OIL 10 (SAE 10W)

AMBRA SUPER 10 (SAE 10W)

ARBOR SUPER 10 (SAE 10W)

URANIA C 10W (SAE 10W)

Lubricant class 03C**Off highway lubricants**

Viscosity grades: SAE 5W-30 / 5W-40 / 10W / 10W-30 / 10W-40 / 15W-30 / 15W-40 / 20W-20 / 20W-40 / 30

Manufacturer (03C)

ADDINOL LUBE OIL GMBH, LEUNA/DE
 ARAL AG, BOCHUM/DE
 ARAL AG, BOCHUM/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
 BP PLC., LONDON/GB
 CASTROL LTD, LONDON/GB
 CASTROL LTD, LONDON/GB
 CASTROL LTD, LONDON/GB
 CASTROL LTD, LONDON/GB
 CASTROL LTD, LONDON/GB
 CASTROL LTD, LONDON/GB
 CATERPILLAR, INC., MOSSVILLE/US
 CATERPILLAR, INC., MOSSVILLE/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
 EXXONMOBIL CORPORATION, FAIRFAX, VA/US
 EXXONMOBIL CORPORATION, FAIRFAX, VA/US
 FABRIKA MAZIVA FAM AD, KRUEVAC/RS
 FABRIKA MAZIVA FAM AD, KRUEVAC/RS
 FUCHS PETROLUB AG, MANNHEIM/DE
 GAZPROMNEFT-LUBRICANTS, MOSCOW/RU
 GAZPROMNEFT-LUBRICANTS, MOSCOW/RU
 INA MAZIVA LTD., ZAGREB/HR
 INA MAZIVA LTD., ZAGREB/HR
 KUWAIT PETROLEUM INTERNATIONAL LUBRICANT, ANTWERP/NL
 KUWAIT PETROLEUM INTERNATIONAL LUBRICANT, ANTWERP/NL
 LUBRIZOL, HAZELWOOD/GB
 LUKOIL LUBRICANTS AUSTRIA GMBH, VIENNA/AT
 LUKOIL LUBRICANTS AUSTRIA GMBH, VIENNA/AT
 NIS AD, NOVI SAD/RS
 NIS AD, NOVI SAD/RS
 PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY
 PHI OIL GMBH, ST. GEORGEN/AT
 PRISTA OIL HOLDING EAD, RUSE/BG
 PRISTA OIL HOLDING EAD, RUSE/BG
 RN-LUBRICANTS, LLC, MOSCOW/RU
 RN-LUBRICANTS, LLC, MOSCOW/RU
 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 COMPANY, BEIJING/CN
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE

Trade name (03C)

ADDINOL FLUID TO-4 SAE 30
 ARAL FLUID TO-4 10W
 ARAL FLUID TO-4 30
 TECTROL UTTO-TO SAE 30
 BP AUTRAN 4 10
 BP AUTRAN 4 10
 BP AUTRAN 4 10
 BP AUTRAN 4 30
 BP AUTRAN TO 410
 BP AUTRAN TO 430
 CASTROL TFC 410
 CASTROL TFC 410
 CASTROL TFC 430
 CASTROL TFC 430
 CASTROL TRANSMAX OFFROAD 10
 CASTROL TRANSMAX OFFROAD 30
 CAT TDTO SAE 10W
 CAT TDTO SAE 30
 TEXTRAN HD 10W
 TEXTRAN HD 30
 TORQUE FLUID 414
 TORQUE FLUID 434
 TORQUE FLUID 434A
 MOBILTRANS HD 10W
 MOBILTRANS HD 30
 TRANSHIDO TO-4 SAE 10W
 TRANSHIDO TO-4 SAE 30
 FUCHS TITAN UTTO TO-4 SAE 30
 G-SPECIAL TO-4 10W
 G-SPECIAL TO-4 30
 INA TRANSMATIK 10W
 INA TRANSMATIK 30
 Q8 TO-4 FLUID SAE 10W
 Q8 TO-4 FLUID SAE 30
 LUBRIZOL OH9230 (SAE 30)
 OMV CONSTRUCT TO-4 SAE 10W
 OMV CONSTRUCT TO-4 SAE 30
 NISOTEC TRANSFLUID TO-4 SAE 30
 NISOTEC TRANSFLUID TO-4 SAE 10W
 PETRONAS CATOIL 10W (SAE 10W)
 KOMCAT SILVER
 PRISTA TO-4 10W
 PRISTA TO-4 30
 TNK CATRAN SAE 10W
 TNK CATRAN SAE 30
 SHELL SPIRAX S4 CX 10 W
 SHELL SPIRAX S4 CX 10 W
 SHELL SPIRAX S4 CX 30
 SHELL SPIRAX S4 CX 30
 SHELL SPIRAX S6 CXME
 SINOPEC PREMIUM HD 30 TRANSMISSION OIL
 SRS GETRIEBEFLUID ZFC
 SRS WIOLIN 410
 SRS WIOLIN 430

Lubricant class 03D

Automatic Transmission Fluids (ATF)

Manufacturer (03D)

CEPSA COMERCIAL PETRÓLEO, MADRID/ES
CEPSA COMERCIAL PETRÓLEO, MADRID/ES
CHEVRON LUBRICANTS, SAN RAMON, CA/US
CHEVRON LUBRICANTS, SAN RAMON, CA/US
CHEVRON LUBRICANTS, SAN RAMON, CA/US
COMERCIAL ROSHFRANS, S.A. DE C.V., MEXICO, D.F./MX
EXXONMOBIL CORPORATION, FAIRFAX, VA/US
GRUPA LOTOS S.A., GDANSK/PL
INA MAZIVA LTD., ZAGREB/HR
INA MAZIVA LTD., ZAGREB/HR
MOL-LUB KFT, ALMASFUZITO/HU
PAKELO MOTOR OIL, SAN BONIFACIO (VR)/IT
PAKELO MOTOR OIL, SAN BONIFACIO (VR)/IT
PETRO-CANADA LUBRICANTS INC., MISSISSAUGA, ONTARIO/CA
REPSOL LUBRICANTES Y ESPECIALIDADES, S.A, MADRID/ES

Trade name (03D)

CEPSA ATF 2000 S
CEPSA ATF 3000 S
HAVOLINE ATF MERCON V
SYNTHETIC AUTOMATIC TRANSMISSION FLUID HEAVY DUTY
TEXAMATIC 4291
ATF ALLPOWER MULTIVEHICULOS
MOBIL ATF 320
LOTOS ATF SUPER III G
INA ATF DX IID
INA ATF SUPER
MOL ATF SYNT 3H
ATF XT III FLUID
AUXON II E
HEAVY DUTY SYNTHETIC BLEND ATF
REPSOL MATIC III

Lubricant class 03E**Universal Tractor Transmission Oil (UTTO)****Manufacturer (03E)**

ADDINOL LUBE OIL GMBH, LEUNA/DE
 ARAL AG, BOCHUM/DE
 AVIA MINERALÖL-AG, MÜNCHEN/DE
 BAYWA AG MÜNCHEN, MÜNCHEN/DE
 BP PLC., LONDON/GB
 BP PLC., LONDON/GB
 BUCHER AG LANGENTHAL, LANGENTHAL/CH
 BUCHER AG LANGENTHAL, LANGENTHAL/CH
 CASTROL LTD, LONDON/GB
 CASTROL LTD, LONDON/GB
 CASTROL LTD, LONDON/GB
 CATERPILLAR, INC., MOSSVILLE/US
 CEPESA COMERCIAL PETRÓLEO, MADRID/ES
 CHEVRON LUBRICANTS, SAN RAMON, CA/US
 CHEVRON LUBRICANTS, SAN RAMON, CA/US
 CHS INC, INVER GROVE HEIGHTS/US
 CLAAS KGAA MBH, HARSEWINKEL/DE
 EXXONMOBIL CORPORATION, FAIRFAX, VA/US
 EXXONMOBIL CORPORATION, FAIRFAX, VA/US
 GAZPROMNEFT-LUBRICANTS, MOSCOW/RU
 GB LUBRICANTS, GATESHEAD/GB
 GULF OIL INTERNATIONAL, MUMBAI/IN
 GULF OIL INTERNATIONAL, MUMBAI/IN
 IGOL FRANCE, AMIENS/FR
 INA MAZIVA LTD., ZAGREB/HR
 INA MAZIVA LTD., ZAGREB/HR
 JCB INDIA, BALLABGARH/IN
 JOHN DEERE, MOLINE, IL/US
 KUWAIT PETROLEUM INTERNATIONAL LUBRICANT, ANTWERP/NL
 KUWAIT PETROLEUM INTERNATIONAL LUBRICANT, ANTWERP/NL
 LIQUI MOLY GMBH, ULM/DE
 LUKOIL LUBRICANTS AUSTRIA GMBH, VIENNA/AT
 MEGUIN GMBH & CO. KG, SAARLOUIS/DE
 OMV PETROL OFISI A.S., ISTANBUL/TR
 PAKELO MOTOR OIL, SAN BONIFACIO (VR)/IT
 PANOLIN AG, MADETSWIL/CH
 PETROBRAS DISTRIBUIDORA S.A., DUQUE DE CAXIAS/BR
 PETROGAL S.A., LISBOA/PT
 PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY
 PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY
 PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY
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 PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY
 PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY
 PHI OIL GMBH, ST. GEORGEN/AT
 SASOL OIL, RANDBURG/ZA
 SAVITA OIL TECHNOLOGIES LIMITED, MUMBAI/IN
 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 COMPANY, 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
 UNIL OPAL, SAUMUR/FR

Trade name (03E)

ADDINOL UTTO SAE 10W-30
 ARAL FLUID HGS
 AVIA HYDROFLUID DLZ
 TECTROL UTTO-HF
 BP TRACTRAN TF-10
 BP VANELLUS AGRI SUPER TRANSMISSION 80W
 FARMER POLY 304
 MOTOREX UTTO CF
 CASTROL AGRI TRANS PLUS 10W-30
 CASTROL AGRI TRANS PLUS 80W
 CASTROL HY-GARD
 CAT MULTIPURPOSE TRACTOR OIL
 CEPESA AURIGA TE 55 10W-30
 CHEVRON 1000 THF
 TEXTRAN TDH PREMIUM
 QWIKLIFT HTB
 CLAAS AGRISHIFT GA 12
 MOBILFLUID 424
 MOBILFLUID 426
 G-SPECIAL UTTO 10W-30
 GB UNITRANS(R) ZF
 GULF MPTF 10W-30
 GULF MPTF 10W-30
 TICMA FLUID MU XTREM
 INA TRANSHIDROL JD 50
 INA TRANSHIDROL JD 50
 JCB REAR AXLE OIL
 JOHN DEERE HY-GARD
 Q8 T 2000
 Q8 T 2200
 LIQUI MOLY SPECIAL UTTO
 OMV AUSTROMATIC LVX
 MEGOL TRAKTORENOEL UTTO PREMIUM SAE 10W-30
 MAXITRAK TMS OIL 500
 UTTO FLUID 4 D SAE 10W/30
 PANOLIN JD 303
 LUBRAX UNITRACTOR SAE 10W-30
 GALP TRALUB 807 S
 AMBRA MULTI G (SAE 10W-30)
 AMBRA MULTI G (SAE 10W-30)
 AMBRA MULTI G (SAE 10W-30)
 AMBRA MULTI G (SAE 10W-30)
 AMBRA MULTI G (SAE 10W-30)
 AMBRA MULTI G (SAE 10W-30)
 ARBOR MTF (SAE 10W-30)
 GEAR OIL UTTO SILVER 10W-30
 UNIVERSAL TRANSMISSION OIL 68
 SAVSOL 315 HAT
 SHELL SPIRAX S4 TXM
 SHELL SPIRAX S4 TXM
 SHELL SPIRAX S4 TXM
 SHELL SPIRAX S6 TXME
 SINOPEC GREATWALL UTTO
 SRS HYDROFLUID N
 ELF TRACTELF BF 16
 TOTAL DYNATRANS MPV
 TOTAL DYNATRANS MPWB
 FLUID VO

Lubricant class 03F

Universal Tractor Transmission Oil (UTTO) in accordance with Group standard ZFN 13030,
use at outside temperatures below -10°C

Manufacturer (03F)

JOHN DEERE, MOLINE, IL/US

SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB

SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB

Trade name (03F)

JOHN DEERE LOW VISCOSITY HY-GARD

SHELL SPIRAX S3 TLV

SHELL SPIRAX S3 TLV

Lubricant class 03G
Universal construction-machinery oil

Manufacturer (03G)
ZF FRIEDRICHSHAFEN AG, FRIEDRICHSHAFEN/DE

Trade name (03G)
ZF-POWERFLUID PLUS

Lubricant class 03H

Biodegradable lubricants

Environmental label RAL-UZ 79 (Blauer Engel), VAMIL-regeling

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 (03H)

PANOLIN AG, MADETSWIL/CH

Trade name (03H)

PANOLIN BIOFLUID ZFH 10W/30

Lubricant class 03K

Engine oil

(API CI-4 Plus/CJ-4/SM or ACEA, category E9)

Viscosity grades: SAE 0W-30 / 0W-40 / 5W-30 / 5W-40 / 10W / 20W-20 / 30 / 10W-30 / 10W-40 / 15W-30 / 15W-40 / 20W-40

Manufacturer (03K)

CHEVRON LUBRICANTS, SAN RAMON, CA/US

CHEVRON LUBRICANTS, SAN RAMON, CA/US

JOHN DEERE, MOLINE, IL/US

JOHN DEERE, MOLINE, IL/US

JOHN DEERE, MOLINE, IL/US

Trade name (03K)

DELO 400 XLE SYNBLEND SAE 10W-30

URSA ULTRA LE 10W-30

JOHN DEERE PLUS 50 II 0W-40

JOHN DEERE PLUS 50 II 10W-30

JOHN DEERE PLUS 50 II 15W-40

Lubricant class 03L

Universal Tractor Transmission Oil (UTTO)

Manufacturer (03L)	Trade name (03L)
JOHN DEERE, MOLINE, IL/US	JOHN DEERE HY-GARD