



**Hydrostatic-mechanical
and electric drive systems**

List of lubricants TE-ML 07

Table of contents	Page
1. Approved lubricant classes	1
2. Low temperature limits	2
3. Explanation of footnotes and comments	2
4. Greasing points	2
5. Lubricant classes and approved trade products	3

1. Approved lubricant classes

Product groups	Lubricant classes for service fills ⁽¹⁾	Alternative lubricant classes for service fills ⁽¹⁾
Powershift transmissions / Transfer box HL AVG ⁽²⁾	07B / 07D / 07E / 07F	---
Continuously variable hydrostatic drives HC	Mechanical section: 07D Hydraulic section: 07D / 07H ⁽³⁾	---
Mobile mixer drives CML, CMe	Mechanical section: Gear oil ZF EcoFluid X (ZF No. 0681 000 412) Hydraulic section: 07D / 07H ⁽³⁾	---
Mobile mixer drives P3301, P4300, P5300, P6300, P7300 PK5300, PK6500, PK7500	07A / 07C / 07E	07D
Mobile mixer drives PLM P3200	07C / 07E	07D
Swing drives DR	07D / 07E / 07G / 07H	---
Transmissions for lifting equipment RME RMT	07A / 07E	---

The list of lubricants TE-ML 07, **edition 10.10.2024** 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 temperature limits

Lubricant classes	Viscosity grades	Use at outside temperatures above ⁽⁴⁾	
		Hydrostatic-mechanical and electric drive - Hydraulic section	Hydrostatic-mechanical and electric drive - Mechanical section
07A (Gear oil)	SAE 75W-90, 75W-110, 75W-140	---	-40°C
	SAE 80W-85, 80W-90, 80W-110, 80W-140	---	-26°C
	SAE 85W-90, 85W-110, 85W-140, 90	---	-12°C
ZF EcoFluid X (Gear oil)	SAE 80W-90	---	-26°C
07B, 07C, 07D, 07F (STOU, engine oil, off highway lubricants)	SAE 5W-30, 5W-40	-35°C	-40°C
	SAE 10W-30, 10W-40	-30°C	-35°C
	SAE 15W-30, 15W-40	-25°C	-30°C
	SAE 20W-20	-20°C	-25°C
	SAE 20W-40	-20°C	---
	SAE 30	-5°C	-10°C
07E (Biodegradable lubricants)	SAE 75W-80	-35°C	-40°C
07G (Biodegradable lubricants)	ISO VG 46	---	-10°C
	ISO VG 68	---	-5°C
07H (hydraulic oil)	ISO VG 46	---	-10°C
	ISO VG 68	---	-5°C
	ISO VG 100	---	0°C

3. Explanation of footnotes and comments

- (1) Refer to the following pages for approved commercial products.
- (2) For AVGs directly mounted on ZF axles, use gear oils in accordance with TE-ML 05 for the common oil circuit of the transmission and axle.
- (3) Moreover, please observe the specifications provided by the vehicle manufacturer or hydraulic manufacturer.
- (4) An even warm-up phase is needed in order to reach the minimum oil temperature required for starting the drive unit (mentioned low temperature limit). At outside temperatures below -5°C, a warm-up phase of at least 10 minutes is required, irrespective of the viscosity grade used.

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. Greasing points

Multi-purpose grease according to the specification / requirement:

- DIN 51825 classification at least KP2K-20
and / or ISO 6743-9 classification at least ISO-L-XBCHB2
- Consistency class: NLGI 2
- Base oil: API Group 1 / 2 / 3 / 4
- Thickener type: lithium, lithium complex
- EP additives
- Temperature operation limits: min. -20°C to +120°C

5. Lubricant classes and approved trade products

Lubricant class 07A

Transmission oil in accordance with Specification

- API GL-5 / MIL-L-2105D
- MIL-PRF-2105E
- SAE J2360

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

Base oil API Group 1 / 2 / 3 / 4

Note:

All trade products which satisfy the above specifications may be used. There will be no product listing.

Manufacturer (07B)

TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
UNIL OPAL, SAUMUR/FR
UNIL OPAL, SAUMUR/FR
UNIL OPAL, SAUMUR/FR
ZELLER+GMELIN GMBH&CO.KG, EISLINGEN/DE

Trade name (07B)

MULTAGRI SUPER 15W-40
AGRI UNIVERSAL 400 10W-40
MULTAGRI SUPER 10W-30
XANTHOS 10W40
XANTHOS ULTRA 10W40
XANTHOS ULTRA 15W40
DIVINOL SYNTRAC TS 10W40

ZF approval number

ZF008264
ZF008316
ZF010693
ZF003672
ZF003673
ZF003674
ZF001626

Lubricant class 07C

Engine oil

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

Manufacturer (07C)

KUWAIT PETROLEUM INTERNATIONAL LUBRICANT, ANTWERP/NL

Trade name (07C)

Q8 T 750 SAE 15W-40

ZF approval number

ZF000125

Lubricant class 07D

Engine oil in accordance with specification

- API CD/CE/CF-4/CF/CG-4/CH-4/CI-4/CI-4 Plus/CJ-4/CK-4
- API SF/SG/SH/SJ/SL/SM/SN
- ACEA-categories A/B/E

Viscosity grades:

Product groups in accordance with page 1	Viscosity grades
<ul style="list-style-type: none"> - Powershift transmissions HL, AVG - Continuously variable hydrostatic drives HC - Mobile mixer drives CML - hydraulic section - Swing drives DR 	SAE 5W-30 / 5W-40 / 10W-30 / 10W-40 / 15W-30 / 15W-40 / 20W-20 / 30
<ul style="list-style-type: none"> - Mobile mixer drives P-series, PK-series and PLM-series 	SAE 10W-40 / 15W-40

Note:

All trade products which satisfy the above specifications may be used. There will be no product listing.

Lubricant class 07E

Biodegradable lubricant (Special approval)

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 (07E)

PANOLIN DISTRIBUTION AG, MADETSWIL/CH

Trade name (07E)

PANOLIN BIOFLUID ZFH 10W/30

ZF approval number

ZF000391

Lubricant class 07F
Off highway lubricants
Viscosity grade: SAE 30

Manufacturer (07F)	Trade name (07F)	ZF approval number
ADDINOL LUBE OIL GMBH, LEUNA/DE	ADDINOL FLUID TO-4 SAE 30	ZF000511
AVIA AG, MÜNCHEN/DE	AVIA GEAR ALCAT 430	ZF003688
AVISTA OIL DEUTSCHLAND GMBH, UETZE/DE	AVISTA PEAK EVO TO-4 SAE 30	ZF004771
BAYWA AG MÜNCHEN, MÜNCHEN/DE	TECTROL UTTO-TO	ZF002194
CASTROL LTD, LONDON/GB	CASTROL TRANSMAX OFFROAD 30	ZF000267
CATERPILLAR, INC., MOSSVILLE/US	CAT TDTO SAE 30	ZF000869
CHAMPION CHEMICALS N.V., HEMIKSEM/BE	CHAMPION U.T.T. OIL 500	ZF003584
CHEVRON LUBRICANTS, SAN RAMON, CA/US	DELO TORQFORCE SAE 30	ZF001903
CHEVRON LUBRICANTS, SAN RAMON, CA/US	URSA TORQFORCE SAE 30	ZF001905
CHEVRON LUBRICANTS, SAN RAMON, CA/US	DELO TORQFORCE SAE 30	ZF006099
ELLIS ENTERPRISES EAST D.O.O. KRUSEVAC, KRUSEVAC/RS	TRANSHIDO TO-4 SAE 30	ZF001108
ELLIS ENTERPRISES EAST D.O.O. KRUSEVAC, KRUSEVAC/RS	VALVOLINE DT TRANSMISSION 30	ZF006104
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILTRANS HD 30	ZF000035
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILTRANS HD 30	ZF004740
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILTRANS HD 30	ZF004745
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILTRANS HD 30	ZF008257
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILTRANS HD 30	ZF008291
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILTRANS HD 30	ZF008292
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILTRANS HD 30	ZF008293
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC MODERN OFF-HIGHWAY TRANS FLUID 30	ZF011922
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC MODERN OFF-HIGHWAY TRANS FLUID 30	ZF011921
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC MODERN OFF-HIGHWAY TRANS FLUID 30	ZF011920
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILTRANS HD 30	ZF011917
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC MODERN OFF-HIGHWAY TRANS FLUID 30	ZF011919
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILTRANS HD 30	ZF011916
FUCHS PETROLUB SE, MANNHEIM/DE	FUCHS TITAN UTTO TO-4 SAE 30	ZF002185
GS CALTEX CORPORATION, SEOUL/KR	KIXX GEARTEC TO-4 30	ZF002238
INA MAZIVA LTD., ZAGREB/HR	INA TRANSMATIK 30	ZF000401
KUWAIT PETROLEUM INTERNATIONAL LUBRICANT, ANTWERP/NL	Q8 TO-4 FLUID SAE 30	ZF002118
MOL-LUB KFT, ALMASFUZITO/HU	MOL TRANSFLUID TO-4 SAE 30	ZF002244
PETRO-CANADA LUBRICANTS INC., MISSISSAUGA, ONTARIO/CA	PRODDURO TO-4 30	ZF003396
PETROGAL S.A., LISBOA/PT	GALP MULTITRANS 30	ZF002015
PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY	TUTELA TRANS TO-4 (SAE 30)	ZF005937
PRISTA OIL HOLDING EAD, RUSE/BG	PRISTA TO-4 30	ZF000884
RAVENSBERGER SCHMIERSTOFFVERTRIEB GMBH, WERTHER/DE	RAVENOL CATOEL TO-4 SAE 30	ZF001852
REPSOL LUBRICANTES Y ESPECIALIDADES, S.A, MADRID/ES	REPSOL TRANSMISSIONS TO-4 SAE 30	ZF003472
REPSOL LUBRICANTES Y ESPECIALIDADES, S.A, MADRID/ES	REPSOL NAVIGATOR TO-4 SAE 30	ZF008280
SAVITA OIL TECHNOLOGIES LIMITED, MUMBAI/IN	SAVSOL ULTRA KES 3-30	ZF009455
SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB	SHELL SPIRAX S4 CX 30	ZF000005
SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB	SHELL SPIRAX S4 CX 30	ZF000969
SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB	SHELL SPIRAX S4 CX 30	ZF001209
SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB	SHELL SPIRAX S4 CX 30	ZF005945
SINOPEC LUBRICANT CO., LTD., BEIJING/CN	SINOPEC PREMIUM HD 30 TRANSMISSION OIL	ZF001088
SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE	SRS WIOLIN 430	ZF001932
TEXSA DO BRASIL LTDA, UMUARAMA/PR/BR	TEXSA TAC-4 30	ZF001921
TEXSA DO BRASIL LTDA, UMUARAMA/PR/BR	MONTANA DYNAMIC HYDROTORK 4 30	ZF003668
TOTALENERGIES LUBRIFIANTS, NANTERRE/FR	TOTAL DYNATRANS ACX 30	ZF002217
VALVOLINE EUROPE, DORDRECHT/NL	VALVOLINE DT TRANSMISSION OIL SAE 30	ZF008295
WOLF OIL CORPORATION N.V., HEMIKSEM/BE	WOLF TRACTOFLUID 500	ZF003583

Lubricant class 07G

Biodegradable lubricant (Special approval)

Viscosity grade: ISO VG 46 / 68

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 (07G)PANOLIN DISTRIBUTION AG, MADETSWIL/CH
PANOLIN DISTRIBUTION AG, MADETSWIL/CH**Trade name (07G)**PANOLIN HLP SYNTH 46
PANOLIN HLP SYNTH 68**ZF approval number**ZF000592
ZF002019

Lubricant class 07H

Hydraulic oil HLP/HVLP in accordance with DIN 51524-2/-3

Viscosity grades: ISO VG 46 / 68 / 100

Base oil API Group 1 / 2 / 3 / 4

Note:

All trade products which satisfy the above specifications may be used. There will be no product listing.