



Industrial Technology

Marine transmissions

List of lubricants TE-ML 04

Table of contents

Page

1. Approved lubricant classes	2
2. Oil level check and change intervals	3
3. Explanation of footnotes and comments	3
4. Greasing points	3
5. Lubricant classes and approved trade products	4

The list of lubricants TE-ML 04, **edition 01.07.2026** 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. Approved lubricant classes

Product groups	Lubricant classes for service fills ⁽¹⁾
ZF 4 to ZF 115 with all derived variants M, A, IV, C, TS, ATS, IVTS	04D
ZF 220 to ZF 83700 with all derived variants A, V, IV, C, U, D, NC, NR, NR2, NR2H, NR2B, TS, ATS, VTS, IVTS	04A / 04B / 04C
ZF 23560 to ZF 23860 with all derived variants NR, C, D	04B / 04C
ZF W220 to ZF W93100 with all derived variants C, NR, NC, DS, NR2H	04A / 04B / 04C
ZF W93300 and ZF W103100 with all derived variants	04E / 04F
BW 5 to BW 5300 with all derived variants	04A / 04B / 04C
BW 2356 to BW 2386	04B / 04C
HBW 35 to HBW 630 HSW 90 to HSW 110 HSW 125 to HSW 800 with all derived variants	04D
IRM 40 to IRM 50	04D
IRM 220 to IRM 350	04A / 04B / 04C
ZF SD 10, SD 12	04P
ZF SD 15	04D
SeaRex 120s, 140s, 160s	Drive oil: 04A / 04B / 04C Hydraulic oil: 04K / 04R
ZF AT 010 to 090 ZF AT 400, 2000 to 8000 with all derived variants WM, RT, DM, SM ZF TT 010 to 090 ZF TT 400, 1000 to 8000 ZF SDT 2000 to 6000	Gearbox: 04H / 04M ⁽⁴⁾ Wet operating clutch: see footnote ⁽⁹⁾ Power pack: 04K ⁽⁶⁾ / 04R ⁽⁷⁾ Planetary gearset ⁽⁵⁾ : 04H Propeller shaft sealing monitoring: 04S For further information on approved greases and oil volumes see ⁽²⁾ For information on oil condition monitoring see ⁽³⁾
ZF TT 4000 CP, 5000 CP	Gearbox and Power pack: 04H For further information on approved greases and oil volumes see ⁽²⁾ For information on oil condition monitoring see ⁽³⁾ For information on approved viscosity grade and use of biodegradable oils in CP tunnel thrusters see ⁽⁸⁾

2. Oil level check and change intervals

Please refer to ZF operating instructions for information on oil level check and oil filter change.
Please refer to ZF operating instructions and / or transmission type plate for information on oil change intervals.

3. Explanation of footnotes and comments

- (1) **Refer to the following pages for approved commercial products.**
- (2) For further information (approved greases, oil volumes) see "Lubricants equivalents list P0166 ZF Marine Krimpen BV".
- (3) Oil condition monitoring
 - Oil condition must be checked on regular intervals by specialized laboratories. Intervals described in maintenance schedules.
 - When water contamination in the oil is reported to be above 0,5% it is recommended to change the oil as soon as possible, at latest within 2 months, and check the water contamination increase on a weekly basis.
 - When water contamination in the oil is reported to be above 3%, the oil must be changed immediately. It is highly advised to stop operation of the unit immediately, and contact service organization for remediate action.
 - The advice / report of the laboratory on both water as other contamination is leading!
 - ZF Marine Krimpen BV is in any case not responsible for damages caused by incorrect follow up of the interval checks and advices regarding water in oil or other contamination.
- (4) Oil change from standard oil to biodegradable oil
The following points must be taken into account:
 - Biodegradable oils are miscible with standard oils. Advice for applying biodegradable oils is that the system should be drained and flushed to ensure that the remaining standard oil content of the refilled system is less than 5 %. Mixture less than 5 % has to be confirmed by laboratory oil analysis.
 - All seals, especially propeller and steering pipe seals, in the thruster unit need to be replaced by new ones.
 - Replace lubricant filter.
 - Recommendation: install water separators on the thruster unit.
 - Take oil samples after 50 up to 100 running hours with the new oil.
- (5) Planetary gearsets valid for ambient temperatures of +5°C to +40°C when not connected to the main lubrication oil system.
- (6) Power pack - for units placed in machinery room or on deck running at standard ambient temperatures use lubricants according to lubricant class 04K.
- (7) Power pack - for units placed on deck running at ice-cold ambient temperatures use lubricants according to lubricant class 04R.
- (8) For CP tunnel thrusters the power pack, lower gearbox and header tank is one oil compartment, this means that the total system is working with ISO VG 100 lubricating oil.
Use of biodegradable oil in CP tunnel thrusters will be only possible if the power pack is specially prepared to be suitable for using biodegradable oil.
- (9) Information regarding the approved lubricants for the wet operating clutch can be found in the operating manual of the respective clutch variant.
For the wet operating clutch mounted to the upper gearbox of the ZF AT 4000, 5000, 6000 lubricants according to lubricant class 04Q must be 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 KP2K-30 and/or
- ISO 6743-9 classification ISO-L-XCCEB2 or
- ISO 6743-9 classification ISO-L-XCCHB2
- Base oil: mineral or synthetic hydrocarbons (no ester)
- Thickener type: Ca, Li (simple, mixed, complex soap)
- Consistency class: NLGI 2
- EP additives
- Temperature operation limits: min. -30°C to +120°C

Note:

All commercial products that meet the above specifications/requirements may be used.

There will be no product listing.

At outside temperatures above -20°C, greases with the following classification may also be used:

- DIN 51825 classification KP2K-20 and/or
- ISO 6743-9 classification ISO-L-XBCEB2 or
- ISO 6743-9 classification ISO-L-XBCHB2

5. Lubricant classes and approved trade products

Lubricant class 04A

Engine oil according to the specification / requirement:

- API CD/CE/CF-4/CF/CG-4/CH-4/CI-4/CI-4 Plus/CJ-4/CK-4
and / or API SF/SG/SH/SJ/SL/SM/SN
and / or ACEA categories A/B/E
- Viscosity grade: SAE 30 (also SAE 40 in hot-weather countries or at oil sump temperatures over +80°C)
- Base oil API Group 1 / 2 / 3 / 4

Note:

1. All trade products which satisfy the above specifications may be used. There will be no product listing.
2. For transmissions which are classified according to DNV, fluids of the class 04A may not be used. Instead of this fluids according to classes 04B or 04C may be used.

Viscosity grade: SAE 30 (also SAE 40 in hot-weather countries or at oil sump temperatures over +80°C)

Manufacturer (04B)	Trade name (04B)	ZF approval number
ADDINOL LUBE OIL GMBH, LEUNA/DE	ADDINOL TURBO DIESEL MD 305 SAE 30	ZF000624
ADDINOL LUBE OIL GMBH, LEUNA/DE	ADDINOL TURBO DIESEL MD 405 SAE 40	ZF000625
CHEVRON LUBRICANTS, SAN RAMON, CA/US	URSA TRANS SAE 40	ZF000821
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC 1630 SAE30	ZF000036
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC 1640 SAE40	ZF000037
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILGARD ADL 30	ZF004805
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILGARD ADL 40	ZF004806
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC LEGEND 1640	ZF006030
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC 1630 SAE30	ZF012052
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC 1630 SAE30	ZF012053
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILGARD ADL 30	ZF012054
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC 1640 SAE40	ZF012056
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC LEGEND 1640	ZF012057
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILGARD ADL 40	ZF012058
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC 1640 SAE40	ZF012055
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILGARD ADL 30	ZF012047
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC 1630 SAE30	ZF012046
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC 1640 SAE40	ZF012048
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC LEGEND 1640	ZF012049
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILGARD ADL 40	ZF012050
FUCHS PETROLUB SE, MANNHEIM/DE	FUCHS TITAN UNIVERSAL HD SAE 30 ZF	ZF000719
FUCHS PETROLUB SE, MANNHEIM/DE	FUCHS TITAN UNIVERSAL HD SAE 40	ZF001190
FUCHS PETROLUB SE, MANNHEIM/DE	FUCHS TITAN UNIVERSAL HD SAE 30	ZF001189
FUCHS PETROLUB SE, MANNHEIM/DE	FUCHS TITAN UNIVERSAL HD SAE 40	ZF012268
GULF OIL INTERNATIONAL, MUMBAI/IN	GULF SUPER DUTY LE 30	ZF001147
GULF OIL MARINE LTD., SINGAPORE/SG	GULFSEA POWER MDO 3015	ZF005947
GULF OIL MARINE LTD., SINGAPORE/SG	GULFSEA POWER MDO 4015	ZF006022
ICONIC LUBRIFICANTES SA, RIO DE JANEIRO/BR	IPIRANGA ULTRAGEAR ZF 40	ZF004859
ICONIC LUBRIFICANTES SA, RIO DE JANEIRO/BR	IPIRANGA ULTRAGEAR ZF 40	ZF004924
INA MAZIVA LTD., ZAGREB/HR	INA GORGONELA S 30	ZF001173
INA MAZIVA LTD., ZAGREB/HR	INA SUPER 3 30	ZF001468
SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB	SHELL RIMULA R3+ 30	ZF001618
SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB	SHELL GADINIA S3 40	ZF002201
SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB	SHELL GADINIA S3 30	ZF002202
TOTALENERGIES LUBRIFIANTS, NANTERRE/FR	CAPRANO MT 40	ZF008308
TOTALENERGIES LUBRIFIANTS, NANTERRE/FR	CAPRANO MT 30	ZF008407
TOTALENERGIES LUBRIFIANTS, NANTERRE/FR	DISOLA MT 40	ZF010957
VIBRA ENERGIA S.A., DUQUE DE CAXIAS/BR	LUBRAX TRM 5 HD SAE 30	ZF001174
VIBRA ENERGIA S.A., DUQUE DE CAXIAS/BR	LUBRAX TRM 5 HD SAE 40	ZF001175
VIBRA ENERGIA S.A., DUQUE DE CAXIAS/BR	LUBRAX TURBO ME 30	ZF006014
VIBRA ENERGIA S.A., DUQUE DE CAXIAS/BR	LUBRAX TURBO ME 40	ZF006015

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

Manufacturer (04C)	Trade name (04C)	ZF approval number
CHEVRON LUBRICANTS, SAN RAMON, CA/US	DELO 400 MGX SAE 15W-40	ZF003355
CHEVRON LUBRICANTS, SAN RAMON, CA/US	DELO 600 ADF SAE 15W-40	ZF009463
CHEVRON LUBRICANTS, SAN RAMON, CA/US	DELO 600 ADF SAE 15W-40	ZF009769
CHEVRON LUBRICANTS, SAN RAMON, CA/US	DELO 400 SLK SAE 15W-40	ZF012115
CHEVRON LUBRICANTS, SAN RAMON, CA/US	DELO 400 SLK SAE 15W-40	ZF012116
CHEVRON LUBRICANTS, SAN RAMON, CA/US	DELO 400 SLK SAE 15W-40	ZF012112
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILGARD HSD+ 15W-40	ZF003522
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILGARD HSD+ 15W-40	ZF003603
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILGARD HSD+ 15W-40	ZF003604
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC XHP ESP 10W-40	ZF005940
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC MODERN 10W-40 ADVANCED PROTECTION	ZF008335
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILGARD HSD+ 15W-40	ZF008402
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILGARD HSD+ 15W-40	ZF009439
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILGARD HSD+ 15W-40	ZF009802
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILGARD HSD+ 15W-40	ZF009511
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILGARD HSD+ 15W-40	ZF010968
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILGARD HSD+ 15W-40	ZF011923
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC MODERN 10W-40 ADVANCED PROTECTION	ZF012010
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC MODERN 10W-40 ADVANCED PROTECTION V3	ZF012070
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC MODERN 10W-40 ADVANCED PROTECTION	ZF012019
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC XHP ESP 10W-40	ZF012018
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC MODERN 10W-40 ADVANCED PROTECTION V4	ZF012071
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC 1300 SUPER 15W-40	ZF012136
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC MODERN 15W-40 FULL PROTECTION	ZF012145
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILGARD HSD+ 15W-40	ZF012137
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILGARD HSD+ 15W-40	ZF012260
ROLLS-ROYCE SOLUTIONS GMBH, FRIEDRICHSHAFEN/DE	DEO SAE 15W-40 ULTRA	ZF008350
SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB	SHELL RIMULA R4 X 15W-40 (CI-4/E7/DH-1)	ZF001482
SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB	SHELL RIMULA R4 L 15W- 40	ZF002262
SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB	ROTELLA T3 FLEET 15W- 40	ZF002266
SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB	ROTELLA T4 TRIPLE PROTECTION 15W- 40 (CK-4)	ZF003486
SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB	SHELL RIMULA R6 M 10W-40	ZF006057
SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB	SHELL RIMULA R6 LM 10W-40	ZF006060
SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB	SHELL RIMULA R6 MS 10W-40	ZF006061
SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB	SHELL SIRIUS S4 15W-40	ZF008209
SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB	SHELL RIMULA R3 X 15W-40	ZF008357

Lubricant class 04D**Automatic Transmission Fluid (ATF)****Manufacturer (04D)**

ACPA, ALEXANDRIA/EG
 ADDINOL LUBE OIL GMBH, LEUNA/DE
 ADDINOL LUBE OIL GMBH, LEUNA/DE
 ADDINOL LUBE OIL GMBH, LEUNA/DE
 ADDINOL LUBE OIL GMBH, LEUNA/DE
 ADDINOL LUBE OIL GMBH, LEUNA/DE
 ADDINOL LUBE OIL GMBH, LEUNA/DE
 ALEXANDRIA MINERAL OILS COMPANY, ALEXANDRIA/EG
 ALEXANDRIA MINERAL OILS COMPANY, ALEXANDRIA/EG
 ALLEGHENY PETROLEUM, WILMERDING, PA/US
 AVISTA OIL DEUTSCHLAND GMBH, UETZE/DE
 AVISTA OIL DEUTSCHLAND GMBH, UETZE/DE
 BASF SE, LUDWIGSHAFEN/DE
 BAYWA AG MÜNCHEN, MÜNCHEN/DE
 BAYWA AG MÜNCHEN, MÜNCHEN/DE
 BELGIN MADENI YAGLAR TIC. VE SAN. A.S., KOCAELI/TR
 BELGIN MADENI YAGLAR TIC. VE SAN. A.S., KOCAELI/TR
 BELGIN MADENI YAGLAR TIC. VE SAN. A.S., KOCAELI/TR
 BELGIN MADENI YAGLAR TIC. VE SAN. A.S., KOCAELI/TR
 BELGIN MADENI YAGLAR TIC. VE SAN. A.S., KOCAELI/TR
 BELGIN MADENI YAGLAR TIC. VE SAN. A.S., KOCAELI/TR
 CASTROL LTD, LONDON/GB
 CASTROL LTD, LONDON/GB
 CASTROL LTD, LONDON/GB
 CASTROL LTD, LONDON/GB
 CASTROL LTD, LONDON/GB
 CHAMPION CHEMICALS N.V., HEMIKSEM/BE
 CHEVRON LUBRICANTS, SAN RAMON, CA/US
 CHEVRON LUBRICANTS, SAN RAMON, CA/US
 CHEVRON LUBRICANTS, SAN RAMON, CA/US
 CITGO PETROLEUM CORPORATION, HOUSTON/US
 CLASS KGAA MBH, HARSEWINKEL/DE
 COMERCIAL ROSHFRANS, S.A. DE C.V., MEXICO, D.F./MX
 ELLIS ENTERPRISES EAST D.O.O. KRUSEVAC, KRUSEVAC/RS
 ELLIS ENTERPRISES EAST D.O.O. KRUSEVAC, KRUSEVAC/RS
 ENILIVE S.P.A., ROME/IT
 ENILIVE S.P.A., ROME/IT
 ENILIVE S.P.A., ROME/IT
 ENILIVE S.P.A., ROME/IT
 EXOL LUBRICANTS LTD, WEDNESBURY/GB
 EXXONMOBIL CORPORATION, HOUSTON, TX/US
 EXXONMOBIL CORPORATION, HOUSTON, TX/US
 EXXONMOBIL CORPORATION, HOUSTON, TX/US
 EXXONMOBIL CORPORATION, HOUSTON, TX/US
 EXXONMOBIL CORPORATION, HOUSTON, TX/US
 EXXONMOBIL CORPORATION, HOUSTON, TX/US
 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
 FUCHS PETROLUB SE, MANNHEIM/DE
 FUCHS PETROLUB SE, MANNHEIM/DE
 FUCHS PETROLUB SE, MANNHEIM/DE
 FUCHS PETROLUB SE, MANNHEIM/DE
 FUCHS PETROLUB SE, MANNHEIM/DE
 FUCHS PETROLUB SE, MANNHEIM/DE
 FUCHS PETROLUB SE, MANNHEIM/DE
 FUCHS PETROLUB SE, MANNHEIM/DE
 GLOBAL LUBRICANT INDUSTRY LLC, AJMAN/AE
 GULF OIL INTERNATIONAL, MUMBAI/IN
 GULF OIL INTERNATIONAL, MUMBAI/IN
 GULF OIL INTERNATIONAL, MUMBAI/IN
 GULF WESTERN OIL (AUST) PTY LTD, ST MARYS/AU
 GÜZEL ENERJİ AKARYAKIT A.Ş., İZMİR/TR
 GÜZEL ENERJİ AKARYAKIT A.Ş., İZMİR/TR
 H. BANTLEON GMBH / GESELLS. D. AVIA, ULM/DE
 HI-TEC OILS, SMITHFIELD/AU
 HUILES BERLIET S.A., SAINT-PIERRE/FR
 HUILES BERLIET S.A., SAINT-PIERRE/FR
 IGOL FRANCE, AMIENS/FR
 INA MAZIVA LTD., ZAGREB/HR
 INA MAZIVA LTD., ZAGREB/HR
 INA MAZIVA LTD., ZAGREB/HR
 INA MAZIVA LTD., ZAGREB/HR
 INA MAZIVA LTD., ZAGREB/HR
 INGRAX INDUSTRIA E COMERCIO DE GRAXA S/A, DUQUE DE CAXIAS/BR
 JOHN DEERE, MOLINE, ILLINOIS/US
 KOCÁK PETROL URUNLERİ SAN.VE TIC.LTD.STİ, KOCAELİ/TR
 KOCÁK PETROL URUNLERİ SAN.VE TIC.LTD.STİ, KOCAELİ/TR
 KUWAIT PETROLEUM (BELGIUM) N.V., ANTWERP/BE
 KUWAIT PETROLEUM (BELGIUM) N.V., ANTWERP/BE
 KUWAIT PETROLEUM (BELGIUM) N.V., ANTWERP/BE
 KUWAIT PETROLEUM (BELGIUM) N.V., ANTWERP/BE
 KUWAIT PETROLEUM (BELGIUM) N.V., ANTWERP/BE
 KUWAIT PETROLEUM (BELGIUM) N.V., ANTWERP/BE
 KUWAIT PETROLEUM (BELGIUM) N.V., ANTWERP/BE
 LAEMMLE CHEMICALS AG, MADETSWIL/CH

Trade name (04D)

ACPA DEX-IIIH
 ADDINOL ATF D III
 ADDINOL ATF D II D
 ADDINOL ATF XN 2
 ADDINOL ATF XN 5
 ADDINOL ATF XN HD
 ADDINOL ATF XN 3
 AMOC POWER
 AMOC POWER PLUS
 ALTRA SHL EXTENDED DRAIN ZF 20C
 AVISTA PEER EVO ATF 3000
 AVISTA PEER EVO ATF 2000
 EMGARD 2805
 TECTROL ATF 3000
 TECTROL ATF 4000
 LUBEX ATF-II
 LUBEX ATF-III M
 BELGIN LUBEX ATF II
 BELGIN LUBEX MITRAS ATF SYN ULTRA
 BELGIN LUBEX ATF-III M
 BELGIN LUBEX MITRAS ATF HD III
 CASTROL TRANSYND
 CASTROL TRANSMAX ATF Z
 TES-295 SYN TRANSMISSION FLUID
 CASTROL TRANSMAX ATF DX II MULTIVEHICLE
 CASTROL TRANSMAX ATF DX III MULTIVEHICLE
 CHAMPION OEM SPECIFIC MULTI VEHICLE ATF HD-LD
 TEXAMATIC 4291
 DELO SYN ATF HD
 HAVOLINE MULTI-VEHICLE ATF
 CITGO QUATRASYN SYNTHETIC TRANSMISSION FLUID
 AGRISHIFT ATF
 ATF ALLPOWER MULTIVEHICULOS
 ATF DII
 VALVOLINE HEAVY DUTY ATF D-II
 ENI ROTRA ATF II E
 ENI ROTRA ATF MULTI
 ENI ROTRA ATF II D
 ENI ROTRA ATF HD PLUS
 AUTOTRANS ELC
 MOBIL ATF 220
 MOBIL ATF SHC
 MOBIL ATF 320
 MOBIL ATF LT 71141
 MOBIL DELVAC 1 ATF
 MOBIL ATF 220
 MOBIL ATF 320
 MOBIL ATF D 21065
 STATOIL TRANSWAY PS DX III
 FUCHS TITAN ATF 5005
 FUCHS TITAN ATF 3000
 PENTOSIN ATF IIIH
 TRANSWAY ATF ULTRA
 FUCHS TITAN ATF 5500
 FUCHS TITAN ATF 1
 FUCHS TITAN ATF 4000
 FUCHS TITAN ATF 4000
 PENTOSIN ATF 1
 BENZOL TRANSDRIVE ATF DEXRON III
 GULF ATF DX III H
 GULF ATF DX II
 GULF ATF PC
 SYN-TS@ ZFV
 ATF DEXRON III EXPERT
 ATF DEXRON II EXPERT
 AVILUB FLUID ATZ 295
 MULTITRANS PLUS ATF
 RTO STARMATIC S3
 RTO STARMATIC 3
 IGOL ATF 430
 INA ATF SUPER
 INA ATF DX III
 INA ATF DX IID
 INA ATF EKSTRA
 INA ATF DX IIIH
 UNIMATIC D-II PLUS
 HD SYNTHETIC TRANSMISSION FLUID
 SPEEDOL ATF DEXRON II
 SPEEDOL ATF DEXRON S III
 Q8 AUTO 20
 Q8 AUTO 14
 Q8 AUTO 14
 Q8 AUTO 15 ED
 Q8 AUTO 15
 Q8 AUTO Z3D
 ROXOR ATF SUPER VTX

ZF approval number

ZF004823
 ZF000699
 ZF000698
 ZF003702
 ZF004911
 ZF004913
 ZF004910
 ZF001702
 ZF001703
 ZF001756
 ZF004774
 ZF004775
 ZF003370
 ZF004798
 ZF004799
 ZF001031
 ZF004892
 ZF008331
 ZF008386
 ZF008387
 ZF011973
 ZF000226
 ZF002158
 ZF002298
 ZF003358
 ZF003368
 ZF007147
 ZF001574
 ZF001664
 ZF001714
 ZF003690
 ZF008242
 ZF000385
 ZF001187
 ZF008168
 ZF000951
 ZF003452
 ZF007174
 ZF012234
 ZF001685
 ZF000033
 ZF000039
 ZF000043
 ZF000044
 ZF001827
 ZF006029
 ZF006088
 ZF000038
 ZF000487
 ZF000717
 ZF000720
 ZF000783
 ZF001330
 ZF001797
 ZF003602
 ZF006024
 ZF000728
 ZF008334
 ZF012217
 ZF000078
 ZF001099
 ZF001349
 ZF004900
 ZF012257
 ZF012258
 ZF002288
 ZF001669
 ZF008343
 ZF008344
 ZF002315
 ZF000248
 ZF000390
 ZF000392
 ZF000410
 ZF002314
 ZF000079
 ZF004851
 ZF000979
 ZF001388
 ZF000083
 ZF000176
 ZF001991
 ZF002121
 ZF002269
 ZF003726
 ZF011929

Manufacturer (04D)

LIEBHERR HYDRAULIKBAGGER GMBH, KIRCHDORF/DE
LIQUI MOLY GMBH, ULM/DE
LIQUI MOLY GMBH, ULM/DE
LIQUI MOLY GMBH, ULM/DE
LIQUI MOLY GMBH, ULM/DE
LIQUI MOLY PRODUKTIONS GMBH & CO. KG, SAARLOUIS/DE
LIQUI MOLY PRODUKTIONS GMBH & CO. KG, SAARLOUIS/DE
LUBREX FZC, SHARJAH/AE
LUKOIL LUBRICANTS EUROPE GMBH, VIENNA/AT
LUKOIL LUBRICANTS EUROPE GMBH, VIENNA/AT
LUKOIL LUBRICANTS EUROPE GMBH, VIENNA/AT
LUKOIL LUBRICANTS EUROPE GMBH, VIENNA/AT
LUKOIL LUBRICANTS EUROPE GMBH, VIENNA/AT
MABANOL GMBH & CO. KG, HAMBURG/DE
MOEVE CLIENT SOLUTIONS, S.A.U., MADRID/ES
MOEVE CLIENT SOLUTIONS, S.A.U., MADRID/ES
MOEVE CLIENT SOLUTIONS, S.A.U., MADRID/ES
MOEVE CLIENT SOLUTIONS, S.A.U., MADRID/ES
MOL-LUB KFT, ALMASFUZITO/HU
MOL-LUB KFT, ALMASFUZITO/HU
MOL-LUB KFT, ALMASFUZITO/HU
MOL-LUB KFT, ALMASFUZITO/HU
MOL-LUB KFT, ALMASFUZITO/HU
MORRIS LUBRICANTS, SHREWSBURY/GB
MOTOREX AG, LANGENTHAL/CH
MOTOREX AG, LANGENTHAL/CH
MOTOREX AG, LANGENTHAL/CH
MOTUL SA, AUBERVILLIERS/FR
MOTUL SA, AUBERVILLIERS/FR
MOTUL SA, AUBERVILLIERS/FR
OILFINO MINERALÖL GMBH, PRISDORF/DE
OILFINO MINERALÖL GMBH, PRISDORF/DE
ORLEN OIL SP. Z O.O., KRAKOW/PL
ORLEN OIL SP. Z O.O., KRAKOW/PL
ORLEN OIL SP. Z O.O., KRAKOW/PL
ORLEN OIL SP. Z O.O., KRAKOW/PL
ORLEN S.A., GDANSK/PL
ORLEN S.A., GDANSK/PL
ORLEN S.A., GDANSK/PL
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
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
PETRO-CANADA LUBRICANTS INC., MISSISSAUGA, ONTARIO/CA
PETRO-CANADA LUBRICANTS INC., MISSISSAUGA, ONTARIO/CA
PETRO-CANADA LUBRICANTS INC., MISSISSAUGA, ONTARIO/CA
PETROGAL S.A., LISBOA/PT
PETROGAL S.A., LISBOA/PT
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
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
PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY
PHI OIL GMBH, ST. GEORGEN/AT
PHI OIL GMBH, ST. GEORGEN/AT
PRISTA OIL HOLDING EAD, RUSE/BG
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
REPSOL LUBRICANTES Y ESPECIALIDADES, S.A, MADRID/ES
REPSOL LUBRICANTES Y ESPECIALIDADES, S.A, MADRID/ES
REPSOL LUBRICANTES Y ESPECIALIDADES, S.A, MADRID/ES
REPSOL LUBRICANTES Y ESPECIALIDADES, S.A, MADRID/ES
REPSOL LUBRICANTES Y ESPECIALIDADES, S.A, MADRID/ES
REPSOL LUBRICANTES Y ESPECIALIDADES, S.A, MADRID/ES
REPSOL LUBRICANTES Y ESPECIALIDADES, S.A, MADRID/ES
REPSOL LUBRICANTES Y ESPECIALIDADES, S.A, MADRID/ES
ROLF LUBRICANTS GMBH, LEVERKUSEN/DE
ROLF LUBRICANTS GMBH, LEVERKUSEN/DE
ROWE MINERALÖLWERK GMBH, WORMS/DE
ROWE MINERALÖLWERK GMBH, WORMS/DE
S.I.R.A.L. SPA, NOLA NAPOLI/IT
SASOL ENERGY, JOHANNESBURG/ZA
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 CO., LTD., BEIJING/CN
SINOPEC LUBRICANT CO., LTD., BEIJING/CN
SINOPEC LUBRICANT CO., LTD., BEIJING/CN
SINOPEC LUBRICANT CO., LTD., BEIJING/CN
SINOPEC LUBRICANT CO., LTD., BEIJING/CN
SPECOL SP. Z O.O., CHORZOW/PL

Trade name (04D)

LIEBHERR HYDRAULIC-GEAR ATF
LIQUI MOLY ATF DEXRON IID
LIQUI MOLY MARINE ATF
LIQUI MOLY ATF III
LIQUI MOLY TOP TEC ATF 1100
MEGOL HYDRAULIKOEL ATF DEXRON II D
MEGOL TRANSMISSION-FLUID ATF III
LUBREX DRIVEMAX III
LUKOIL ATF SYNTH MN Z3
LUKOIL ATF
LUKOIL ATF IID
LUKOIL ATF SYNTH MULTI
TEBOIL FLUID ES-MAX
MABANOL RADON GEAR ATF III MV
CEPSA ATF 3000 S
CEPSA ATF 70
CEPSA ATF 2000S
CEPSA ATF 4000 S
MOL ATF SYNT
MOL ATF 3G
MOL ATF
MOL ATF SYNT 3H
MOL ATF SYNT
MULTITRANS ACV
MOTOREX YORK ATF TP
YORK 886
MOTOREX_YORK ATF VZ
MOTUL DEXRON III
MOTUL DEXRON II D
MOTUL ATF HD
OILFINO SPONTE ATF II
OILFINO SPONTE ATF III
HIPOL ATF II D
HIPOL ATF II E
PLATINUM GEAR ATF III
ORLEN OIL GEAR ATF III
LOTOS ATF II D
LOTOS ATF II D
LOTOS ATF IIIG
ATF XT III FLUID PLUS
ATF XT III FLUID
DX FLUID II TS
DURADRIVE HD LONG DRAIN ATF
DURADRIVE HD SYNTHETIC BLEND ATF
DURADRIVE HD ATF
DURADRIVE HD ATF
GALP TRANSMATIC D II
GALP TRANSMATIC D III
GALP TRANSMATIC Z
ATF DX-3
TUTELA TRANSMISSION ATF 120
TUTELA TRANSMISSION GI/A
TUTELA TRANSMISSION GI/E
ARBOR MTA
PETRONAS TUTELA ATF 700 HD
PETRONAS TUTELA ATF 500 HD
PETRONAS TUTELA ATF 500 HD
TUTELA ATF 900 HD
PETRONAS TUTELA GI/A
ATF D3 SILVER
ATF D3 GOLD
PRISTA ATF
TRANSFLUID SYNTHETIC M-5
RAVENOL DEXRON III H
REPSOL MATIC ATF
REPSOL MATIC ATF
REPSOL MATIC ATF
REPSOL MATIC III
REPSOL MATIC SINTETICO
REPSOL AUTOMATOR ATF III
REPSOL AUTOMATOR ATF 14C
REPSOL AUTOMATOR ATF II
REPSOL AUTOMATOR ATF II
REPSOL AUTOMATOR ATF II
ROLF ATF IID
ROLF ATF IIIG
ROWE HIGHTEC ATF 9000
ROWE HIGHTEC ATF 8000
SIROIL ATF MAXIMUM
SYN TRANSMISSION OIL VI
SHELL SPIRAX S6 ATF VM PLUS
SPIRAX S4 ATF HDX
SHELL SPIRAX S2 ATF AX
SHELL SPIRAX S6 ATF ZM
SINOPEC GREATWALL ATF III LD
SINOPEC GREATWALL ATF HD S
SINOPEC GREATWALL SYNTHETIC ATF HD
SINOPEC GREATWALL ATF HD
SINOPEC GREATWALL FULLY SYNTHETIC ATF HD S
HIPOSPEC ATF IID

ZF approval number

ZF002119
ZF002052
ZF004927
ZF004928
ZF004926
ZF001992
ZF004922
ZF006044
ZF009451
ZF010990
ZF012152
ZF012149
ZF012153
ZF004879
ZF000386
ZF001939
ZF002040
ZF006058
ZF001155
ZF001179
ZF001251
ZF001895
ZF004917
ZF002268
ZF006045
ZF004907
ZF006107
ZF001008
ZF001104
ZF003587
ZF000736
ZF000737
ZF000081
ZF003623
ZF006002
ZF011155
ZF000362
ZF001043
ZF001093
ZF001748
ZF001177
ZF000376
ZF004791
ZF004790
ZF009442
ZF012265
ZF000331
ZF001425
ZF001893
ZF001667
ZF000053
ZF000308
ZF000481
ZF000486
ZF003627
ZF003635
ZF004757
ZF005936
ZF011958
ZF001003
ZF003507
ZF000355
ZF001025
ZF001609
ZF000022
ZF000222
ZF000224
ZF000318
ZF003586
ZF008281
ZF008282
ZF008283
ZF008284
ZF008285
ZF003371
ZF003372
ZF001937
ZF001938
ZF003709
ZF001091
ZF001371
ZF001812
ZF005982
ZF006080
ZF001360
ZF003346
ZF003347
ZF003348
ZF003345
ZF003354

Manufacturer (04D)

SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE
 TEDEX S.A., LUBOCHNIA/PL
 TEDEX S.A., LUBOCHNIA/PL
 TEDEX S.A., LUBOCHNIA/PL
 TEDEX S.A., LUBOCHNIA/PL
 TEXSA DO BRASIL LTDA, UMUARAMA/PR/BR
 TEXSA DO BRASIL LTDA, UMUARAMA/PR/BR
 TONGYI PETROLEUM CHEMICAL CO., LTD., BEIJING/CN
 TONGYI PETROLEUM CHEMICAL CO., LTD., BEIJING/CN
 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
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
 UNIL OPAL, SAUMUR/FR
 UNIL OPAL, SAUMUR/FR
 UNITED OIL COMPANY PTE LTD, SINGAPORE/SG
 UNITED OIL COMPANY PTE LTD, SINGAPORE/SG
 UNIX AUTO, BUDAPEST/HU
 VALVOLINE EUROPE, DORDRECHT/NL
 VALVOLINE EUROPE, DORDRECHT/NL
 VALVOLINE GLOBAL PRODUCTS, LEXINGTON/US
 VIBRA ENERGIA S.A., DUQUE DE CAXIAS/BR
 WOLF OIL CORPORATION N.V., HEMIKSEM/BE
 ZELLER+GMELIN GMBH&CO.KG, EISLINGEN/DE
 ZF FRIEDRICHSHAFEN AG, FRIEDRICHSHAFEN/DE
 ZF FRIEDRICHSHAFEN AG, FRIEDRICHSHAFEN/DE
 ZF FRIEDRICHSHAFEN AG, FRIEDRICHSHAFEN/DE

Trade name (04D)

SRS WOLIN ATF D
 SRS WOLIN ATF III
 SRS WOLIN ATF III MV
 TEDEX ATF III
 TEDEX ATF SYNTHETIC (S)
 TEDEX SYNTHETIC ATF
 TEDEX ATF II D
 TEXSA ATF SUPER
 MONTANA DYNAMIC ATF 2
 LINGXIAN 6+ AUTOMATIC TRANSMISSION FLUID
 LINGXIAN 10+ AUTOMATIC TRANSMISSION FLUID
 ELF ELFMATIC G3 SYN
 ELF ELFMATIC G3
 FLUIDMATIC D3
 FLUIDMATIC D2
 ELFMATIC D2
 FLUIDMATIC D2
 FLUIDMATIC AT 42
 FLUIDMATIC XLD FE
 ELFMATIC D2
 MATIC DX III
 MATIC D
 UNITED MV 99
 UNITED ATF MV 88
 A.Z. MEISTERTEILE GETRIEBEÖL ATF III
 VALVOLINE HEAVY DUTY ATF PRO LD
 VALVOLINE HEAVY DUTY ATF PRO
 SYN GARD™ ATF ES
 LUBRAX ATF HD
 WOLF OFFICIALTECH MULTI VEHICLE ATF HD-LD
 DIVINOL ATF SPEZIAL R
 ZF LIFEGUARDFLUID 5
 ZF ECOFLUID A LIFE
 ZF MARINE SAFEGUARD

ZF approval number

ZF000438
 ZF000439
 ZF002061
 ZF001350
 ZF002213
 ZF001279
 ZF002043
 ZF001207
 ZF003664
 ZF003377
 ZF003378
 ZF001582
 ZF001699
 ZF004886
 ZF006067
 ZF006068
 ZF006069
 ZF008239
 ZF008244
 ZF010594
 ZF001010
 ZF001071
 ZF003562
 ZF010099
 ZF005996
 ZF001872
 ZF001873
 ZF003710
 ZF002120
 ZF006128
 ZF009444
 ZF001363
 ZF001671
 ZF008364

Lubricant class 04E

Engine oil according to the specification / requirement:

- API CD/CE/CF-4/CF/CG-4/CH-4/CI-4/CI-4 Plus/CJ-4/CK-4
and / or API SF/SG/SH/SJ/SL/SM/SN
and / or ACEA categories A/B/E
- Viscosity grade: SAE 50
- 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.

Lubricant class 04F
Lubricating oil CLP
Viscosity grade: ISO VG 220

Manufacturer (04F)	Trade name (04F)	ZF approval number
CASTROL LTD, LONDON/GB	CASTROL ALPHASYN HG 220	ZF010860
CHEVRON LUBRICANTS, SAN RAMON, CA/US	MEROPA 220	ZF000811
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILGEAR 600 XP 220	ZF000852
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILGEAR 600 XP 220	ZF010965

Lubricant class 04H

Lubricating oil CLP

Viscosity grade (product groups in accordance with page 1):

- ZF AT, TT, SDT - L-Drive variants - Gearbox: ISO VG 100
- ZF AT, TT, SDT - Z-Drive variants - Gearbox: ISO VG 150
- ZF AT, TT, SDT - Planetary gearset: ISO VG 100 / 150
- ZF TT 4000 CP, 5000 CP - Gearbox und Power pack: ISO VG 100

Manufacturer (04H)

AVIA AG, MÜNCHEN/DE
 AVIA AG, MÜNCHEN/DE
 CASTROL LTD, LONDON/GB
 CASTROL LTD, LONDON/GB
 CASTROL LTD, LONDON/GB
 CASTROL LTD, LONDON/GB
 CHEVRON LUBRICANTS, SAN RAMON, CA/US
 CHEVRON LUBRICANTS, SAN RAMON, CA/US
 CHEVRON LUBRICANTS, SAN RAMON, CA/US
 CHEVRON LUBRICANTS, SAN RAMON, CA/US
 ENILIVE S.P.A., ROME/IT
 ENILIVE S.P.A., ROME/IT
 EXXONMOBIL CORPORATION, HOUSTON, TX/US
 EXXONMOBIL CORPORATION, HOUSTON, TX/US
 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
 GULF OIL MARINE LTD., SINGAPORE/SG
 GULF OIL MARINE LTD., SINGAPORE/SG
 H. BANTLEON GMBH / GESELLS. D. AVIA, ULM/DE
 H. BANTLEON GMBH / GESELLS. D. AVIA, ULM/DE
 INDIAN OIL CORPORATION LTD, MUMBAI/IN
 INDIAN OIL CORPORATION LTD, MUMBAI/IN
 KLÜBER LUBRICATION, MUNICH/DE
 KLÜBER LUBRICATION, MUNICH/DE
 SCHAEFFER MFG., SAINT LOUIS MO/US
 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
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE

Trade name (04H)

AVIA GEAR RSX 100
 AVIA GEAR RSX 150
 CASTROL ALPHASYN HG 150
 CASTROL ALPHASYN HG 100
 CASTROL ALPHA SP 100
 CASTROL ALPHA SP 150
 MEROPA 100
 MEROPA XL 100
 MEROPA 150
 MEROPA XL 150
 ENI BLASIA FMP 150
 ENI BLASIA SX 100
 MOBILGEAR 600 XP 100
 MOBIL SHC GEAR 150
 MOBILGEAR XMP 150
 MOBILGEAR 600 XP 150
 MOBILGEAR 600 XP 150
 FUCHS RENOLIN UNISYN CLP 100
 FUCHS RENOLIN UNISYN CLP 150
 GULFSEA GEAR OIL 100
 GULFSEA GEAR OIL 150
 AVIA SYNTOGear PE 100
 AVIA SYNTOGear PE 150
 SERVOMESH XP 150
 SERVOMESH XP 100
 KLÜBERSYNTH GEM 4-150 N
 KLÜBERSYNTH GEM 4-100 N
 209AM MARINE MOLY UNIVERSAL GEAR LUBE ISO 150
 SHELL OMALA S4 GXV 150
 SHELL OMALA S2 GX 100
 SHELL OMALA S2 GX 150
 SHELL MARINE GEAR FLUID S2 GX 150
 SRS ERSOLAN 100
 SRS ERSOLAN 150

ZF approval number

ZF003431
 ZF003476
 ZF002094
 ZF003449
 ZF011122
 ZF011123
 ZF003568
 ZF003569
 ZF003570
 ZF003571
 ZF003423
 ZF003424
 ZF003532
 ZF003534
 ZF003536
 ZF003533
 ZF010964
 ZF003504
 ZF003505
 ZF003517
 ZF003518
 ZF003493
 ZF003494
 ZF003723
 ZF006041
 ZF003483
 ZF003482
 ZF003591
 ZF003549
 ZF008359
 ZF008360
 ZF010066
 ZF003462
 ZF003463

Lubricant class 04K

Hydraulic oil HLP

Viscosity grade (product groups in accordance with page 1):

- SeaRex: ISO VG 32 / 46

- ZF AT, TT, SDT - Power pack: ISO VG 46

Manufacturer (04K)

AVIA AG, MÜNCHEN/DE
 AVIA AG, MÜNCHEN/DE
 AVIA AG, MÜNCHEN/DE
 AVIA AG, MÜNCHEN/DE
 CASTROL LTD, LONDON/GB
 CASTROL LTD, LONDON/GB
 CASTROL LTD, LONDON/GB
 CASTROL LTD, LONDON/GB
 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
 CHEVRON LUBRICANTS, SAN RAMON, CA/US
 ENILIVE S.P.A., ROME/IT
 ENILIVE S.P.A., ROME/IT
 EXXONMOBIL CORPORATION, HOUSTON, TX/US
 EXXONMOBIL CORPORATION, HOUSTON, TX/US
 EXXONMOBIL CORPORATION, HOUSTON, TX/US
 EXXONMOBIL CORPORATION, HOUSTON, TX/US
 EXXONMOBIL CORPORATION, HOUSTON, TX/US
 EXXONMOBIL CORPORATION, HOUSTON, TX/US
 INDIAN OIL CORPORATION LTD, MUMBAI/IN
 INDIAN OIL CORPORATION LTD, MUMBAI/IN
 KLÜBER LUBRICATION, MUNICH/DE
 KLÜBER LUBRICATION, MUNICH/DE
 SCHAEFFER MFG., SAINT LOUIS MO/US
 SCHAEFFER MFG., SAINT LOUIS MO/US
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE

Trade name (04K)

AVIA FLUID ZAD 32
 AVIA FLUID ZAD 46
 AVIA FLUID RSL 32
 AVIA FLUID RSL 46
 HYSPIIN AWS 32 HX
 HYSPIIN AWS 46 HX
 HYSPIIN AWS 32
 HYSPIIN AWS 46
 RANDO HD 32
 RANDO HD 46
 CLARITY HYDRAULIC OIL AW 46
 CLARITY HYDRAULIC OIL AW 32
 CLARITY AW 32
 CLARITY AW 46
 ENI OSO 32
 ENI OSO 46
 MOBIL DTE 10 EXCEL 32
 MOBIL DTE 10 EXCEL 32
 MOBIL DTE 10 EXCEL 46
 MOBIL DTE 10 EXCEL 46
 MOBIL DTE 10 EXCEL 32
 MOBIL DTE 10 EXCEL 46
 SERVOSYSTEM HLP 32
 SERVOSYSTEM HLP 46
 LAMORA HLP 46
 LAMORA HLP 32
 112M MARINE HTC OIL ISO 32
 112M MARINE HTC OIL ISO 46
 SHELL TELLUS S2 MX 32
 SHELL TELLUS S2 MX 46
 SHELL MARINE HYDRAULIC FLUID S2 MX 46
 SRS WIOLAN HS 32
 SRS WIOLAN HS 46
 SRS WIOLAN HX 46
 SRS WIOLAN HX 32

ZF approval number

ZF003477
 ZF003478
 ZF003422
 ZF003475
 ZF004933
 ZF005933
 ZF010858
 ZF010859
 ZF003573
 ZF003574
 ZF003578
 ZF003577
 ZF012005
 ZF012011
 ZF003425
 ZF003426
 ZF006130
 ZF006131
 ZF006132
 ZF006133
 ZF012008
 ZF012009
 ZF003721
 ZF003722
 ZF003485
 ZF003484
 ZF003580
 ZF003581
 ZF003537
 ZF003540
 ZF010033
 ZF003456
 ZF003457
 ZF003458
 ZF003459

Lubricant class 04M

Biodegradable oil

Viscosity grade (product groups in accordance with page 1):

- ZF AT, TT, SDT L-Drive variants - Gearbox: ISO VG 100

- ZF AT, TT, SDT Z-Drive variants - Gearbox: ISO VG 150

Note:

For use of biodegradable oils see footnotes and comments 3 and 4 page 2.

Manufacturer (04M)

CASTROL LTD, LONDON/GB
 CASTROL LTD, LONDON/GB
 CASTROL LTD, LONDON/GB
 CASTROL LTD, LONDON/GB
 EXXONMOBIL CORPORATION, HOUSTON, TX/US
 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
 KAJO GMBH, ANROECHTE/DE
 KAJO GMBH, ANROECHTE/DE
 KLÜBER LUBRICATION, MUNICH/DE
 KLÜBER LUBRICATION, MUNICH/DE
 PANOLIN DISTRIBUTION AG, STEINHAUSEN/CH
 PANOLIN DISTRIBUTION AG, STEINHAUSEN/CH
 PANOLIN DISTRIBUTION AG, STEINHAUSEN/CH
 PANOLIN DISTRIBUTION AG, STEINHAUSEN/CH
 SCHAEFFER MFG., SAINT LOUIS MO/US
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB
 VICKERS OILS, LEEDS/GB
 VICKERS OILS, LEEDS/GB

Trade name (04M)

CASTROL BIOTAT 100
 CASTROL BIOTAT 150
 CASTROL BIOTRANS GB 100
 CASTROL BIOTRANS GB 150
 MOBIL SHC AWARE GEAR 100
 MOBIL SHC AWARE GEAR 150
 MOBIL SHC AWARE GEAR OIL 100
 MOBIL SHC AWARE GEAR OIL 150
 PLANTOGear 150 S
 PLANTOGear 100 S
 KAJO®-BIO-GEAR OIL 150
 KAJO®-BIO-GEAR OIL 100
 KLÜBERBIO EG 2-100
 KLÜBERBIO EG 2-150
 SHELL PANOLIN S4 GEAR EAL 100
 SHELL PANOLIN S4 GEAR EAL 150
 SHELL PANOLIN S4 GEAR 100
 SHELL PANOLIN S4 GEAR 150
 567M VGP EAL MARINE ECOSHIELD EP 150
 SHELL NATURELLE S4 GEAR FLUID 100
 SHELL NATURELLE S4 GEAR FLUID 150
 BIOGEAR XP 100
 BIOGEAR XP 150

ZF approval number

ZF002122
 ZF002203
 ZF012138
 ZF012139
 ZF002281
 ZF002282
 ZF012221
 ZF012222
 ZF008358
 ZF008348
 ZF012161
 ZF012160
 ZF001732
 ZF001733
 ZF012037
 ZF012038
 ZF012030
 ZF012031
 ZF004920
 ZF001792
 ZF001793
 ZF002204
 ZF002265

Lubricant class 04P

Engine oil according to the specification / requirement:

- API CD/CE/CF-4/CF/CG-4/CH-4/CI-4/CI-4 Plus/CJ-4/CK-4
and / or API SF/SG/SH/SJ/SL/SM/SN
and / or ACEA categories A/B/E
- Viscosity grade: SAE 15W-40
- 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.

Lubricant class 04Q

Lubricating oil

Viscosity grade: ISO VG 150

Manufacturer (04Q)

CASTROL LTD, LONDON/GB
KLÜBER LUBRICATION, MUNICH/DE
PANOLIN DISTRIBUTION AG, STEINHAUSEN/CH
SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB

Trade name (04Q)

CASTROL ALPHASYN HG 150
KLÜBERBIO EG 2-150
SHELL PANOLIN S4 GEAR 150
SHELL NATURELLE S4 GEAR FLUID 150

ZF approval number

ZF002094
ZF001733
ZF012031
ZF001793

Lubricant class 04R

Hydraulic oil HVLP

Viscosity grade (product groups in accordance with page 1):

- SeaRex: ISO VG 32 / 46

- ZF AT, TT, SDT - Power pack: ISO VG 46

Manufacturer (04R)

AVIA AG, MÜNCHEN/DE
 AVIA AG, MÜNCHEN/DE
 CASTROL LTD, LONDON/GB
 CASTROL LTD, LONDON/GB
 CHEVRON LUBRICANTS, SAN RAMON, CA/US
 CHEVRON LUBRICANTS, SAN RAMON, CA/US
 ENILIVE S.P.A., ROME/IT
 ENILIVE S.P.A., ROME/IT
 EXXONMOBIL CORPORATION, HOUSTON, TX/US
 EXXONMOBIL CORPORATION, HOUSTON, TX/US
 EXXONMOBIL CORPORATION, HOUSTON, TX/US
 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
 FUCHS PETROLUB SE, MANNHEIM/DE
 FUCHS PETROLUB SE, MANNHEIM/DE
 GULF OIL MARINE LTD., SINGAPORE/SG
 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
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE

Trade name (04R)

AVIA FLUID HVI 32
 AVIA FLUID HVI 46
 HYSPI AWH-M 32
 HYSPI AWH-M 46
 RANDO HDZ 32
 RANDO HDZ 46
 ENI ARNICA 46
 ENI ARNICA 32
 MOBIL DTE 10 EXCEL 32
 MOBIL DTE 10 EXCEL 32
 MOBIL DTE 10 EXCEL 46
 MOBIL DTE 10 EXCEL 46
 MOBIL DTE 10 EXCEL 32
 MOBIL DTE 10 EXCEL 46
 FUCHS RENOLIN B 32 HVI
 FUCHS RENOLIN B 46 HVI
 FUCHS RENOLIN UNISYN OL 32
 FUCHS RENOLIN UNISYN OL 46
 GULFSEA HYDRAULIC HVI PLUS 46
 SHELL TELLUS S2 VX 46
 SHELL TELLUS S2 VX 32
 SHELL MARINE HYDRAULIC FLUID S2 VX 32
 SHELL MARINE HYDRAULIC FLUID S2 VX 46
 SRS WIOLAN HV 32
 SRS WIOLAN HV 46

ZF approval number

ZF003479
 ZF003480
 ZF005934
 ZF005935
 ZF003575
 ZF003576
 ZF003428
 ZF003427
 ZF006130
 ZF006131
 ZF006132
 ZF006133
 ZF012008
 ZF012009
 ZF003506
 ZF003508
 ZF003514
 ZF003515
 ZF003516
 ZF003543
 ZF003544
 ZF010034
 ZF010035
 ZF003460
 ZF003461

Lubricant class 04S

Biodegradable oil

Viscosity grade (product groups in accordance with page 1):

- ZF AT, TT - Propeller shaft sealing monitoring: ISO VG 46 / 68

Manufacturer (04S)

CASTROL LTD, LONDON/GB
CASTROL LTD, LONDON/GB
KLÜBER LUBRICATION, MUNICH/DE
PANOLIN DISTRIBUTION AG, STEINHAUSEN/CH
PANOLIN DISTRIBUTION AG, STEINHAUSEN/CH

Trade name (04S)

CASTROL BIOBAR 46
CASTROL BIOBAR 68
KLÜBERBIO EG 2-68
SHELL PANOLIN S4 HLP SYNTH EAL 46
SHELL PANOLIN S4 HLP SYNTH EAL 68

ZF approval number

ZF009429
ZF009430
ZF010979
ZF012035
ZF012036