



Marine transmissions

List of lubricants TE-ML 04

Table of contents

Page

1. Approved lubricant classes	1
2. Oil Level Check and Change Intervals	2
3. Explanation of footnotes and comments	2
4. Lubricant classes and approved trade products	3

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 60500 with all derived variants A, V, IV, C, U, D, 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
SeaRex 120s, 140s, 160s	Drive oil: 04A / 04B / 04C Hydraulic oil: 04K
ZF AT 400, 2000 to 8000 with all derived variants WM, RT, DM, SM ZF TT 400, 1000 to 8000 ZF SDT 2000 to 6000	Gear box part: 04H / 04M / 04Q Wet operating clutch part: 04Q Power pack part: 04K (2), (3), (4)
ZF TT 4000 CP, 5000 CP	Gear box and Power pack part: 04H (2), (3)
PPD, PPS	04G

The list of lubricants TE-ML 04, **edition 28.01.2018** 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.

ZF Friedrichshafen AG
D-88038 Friedrichshafen
www.zf.com/contact

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 fill quantities, evaluation of oil condition, etc.) see "Lubricants equivalents list P0166 ZF Krimpen".
- (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 gear oils. Advice for applying biodegradable oils is that the system should be drained and flushed to ensure that the remaining standard gear 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.

A Multipurpose grease classified KP2K-20 acc. to DIN 51825 or ISO-L-XBCHB2 acc. to ISO 6743-9 must be used on greasing points (base oil API Group 1, 2, 3 or 4, EP additives, lithium saponified, temperature use limits min. between -20 and +120° C, NLGI-Class 2).

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. Lubricant classes and approved trade products

Lubricant class 04A

Engine oil in accordance with specification

- API CD/CE/CF-4/CF/CG-4/CH-4/CI-4/CI-4 Plus/CJ-4

- API SF/SG/SH/SJ/SL/SM

- ACEA categories A/B/E

Viscosity grade: SAE 30, also SAE 40 in hot countries or when oil sump temperatures are above +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.

Lubricant class 04B

Engine oil

Viscosity grade: SAE 30, also SAE 40 in hot countries or when oil sump temperatures are above +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
FUCHS PETROLUB SE, MANNHEIM/DE	FUCHS TITAN UNIVERSAL HD SAE 30 ZF	ZF000719
FUCHS PETROLUB SE, MANNHEIM/DE	FUCHS TITAN UNIVERSAL HD SAE 30	ZF001189
FUCHS PETROLUB SE, MANNHEIM/DE	FUCHS TITAN UNIVERSAL HD SAE 40	ZF001190
GULF OIL INTERNATIONAL, MUMBAI/IN	GULF SUPER DUTY LE 30	ZF001147
INA MAZIVA LTD., ZAGREB/HR	INA GORGONELA S 30	ZF001173
INA MAZIVA LTD., ZAGREB/HR	INA SUPER 3 30	ZF001468
IPIRANGA PRODUTOS DE PETRÓLEO SA, RIO DE JANEIRO/BR	IPIRANGA ULTRAGEAR 40	ZF001340
IPIRANGA PRODUTOS DE PETRÓLEO SA, RIO DE JANEIRO/BR	IPIRANGA ULTRAGEAR ZF 40	ZF002264
KUWAIT PETROLEUM INTERNATIONAL LUBRICANT, ANTWERP/NL	Q8 MOZART DP SAE 30	ZF000095
KUWAIT PETROLEUM INTERNATIONAL LUBRICANT, ANTWERP/NL	Q8 MOZART DP SAE 40	ZF000096
OOO "PROIZVODSTVO ZAVOD IMENI SHAUMYANA", SAINT-PETERSBURG/RU	M-14D2CE (SAE 40)	ZF001095
PANOLIN AG, MADETSWIL/CH	PANOLIN EXTRA DIESEL 30	ZF000393
PETROBRAS DISTRIBUIDORA S.A., DUQUE DE CAXIAS/BR	LUBRAX TURBO SAE 30	ZF000581
PETROBRAS DISTRIBUIDORA S.A., DUQUE DE CAXIAS/BR	LUBRAX TURBO SAE 40	ZF000582
PETROBRAS DISTRIBUIDORA S.A., DUQUE DE CAXIAS/BR	LUBRAX TRM 5 HD SAE 30	ZF001174
PETROBRAS DISTRIBUIDORA S.A., DUQUE DE CAXIAS/BR	LUBRAX TRM 5 HD SAE 40	ZF001175
PETROBRAS DISTRIBUIDORA S.A., DUQUE DE CAXIAS/BR	LUBRAX TRM 40	ZF001742
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
TOTAL LUBRIFIANTS S.A., NANTERRE/FR	TOTAL CAPRANO TD 30	ZF000533
TOTAL LUBRIFIANTS S.A., NANTERRE/FR	TOTAL CAPRANO TD 40	ZF000534

Lubricant class 04D

Automatic Transmission Fluid (ATF)

Manufacturer (04D)	Trade name (04D)	ZF approval number
ADDINOL LUBE OIL GMBH, LEUNA/DE	ADDINOL ATF D II E	ZF000697
ADDINOL LUBE OIL GMBH, LEUNA/DE	ADDINOL ATF D II D	ZF000698
ADDINOL LUBE OIL GMBH, LEUNA/DE	ADDINOL ATF D III	ZF000699
ALEXANDRIA MINERAL OILS COMPANY, ALEXANDRIA/EG	AMOC POWER	ZF001702
ALEXANDRIA MINERAL OILS COMPANY, ALEXANDRIA/EG	AMOC POWER PLUS	ZF001703
ALLEGHENY PETROLEUM, WILMERDING, PA/US	ALTRA SHL EXTENDED DRAIN ZF 20C	ZF001756
AMALIE PETROQUIMICA, MADRID/ES	ATF DEXRON III	ZF001121
AMALIE PETROQUIMICA, MADRID/ES	ATF DEXRON II	ZF001128
AMSOIL, INC., SUPERIOR, WI/US	TORQUE-DRIVE SYNTHETIC ATF	ZF001841
ARAL AG, BOCHUM/DE	ARAL GETRIEBEÖL ATF LD	ZF000144
ARAL AG, BOCHUM/DE	ARAL GETRIEBEÖL ATF 55	ZF000146
ARAL AG, BOCHUM/DE	ARAL GETRIEBEÖL ATF 22	ZF000147
ASTRIS SA, GIORNICO/CH	ASTRIS ATF GLOBAL	ZF002187
AVISTA OIL DEUTSCHLAND GMBH, UETZE/DE	AVISTA SUPER FLUID TYP P/CN	ZF002128
AVISTA OIL DEUTSCHLAND GMBH, UETZE/DE	AVISTA SUPER FLUID ATF 3000	ZF002129
AVISTA OIL DEUTSCHLAND GMBH, UETZE/DE	PENNASOL SUPER FLUID ATF 3000	ZF002296
AVISTA OIL DEUTSCHLAND GMBH, UETZE/DE	PENNASOL SUPER FLUID TYP P/CN	ZF002297
AVISTA OIL DEUTSCHLAND GMBH, UETZE/DE	MOTOR GOLD FLUIDTEC TYP P/CN	ZF002311
AVISTA OIL DEUTSCHLAND GMBH, UETZE/DE	MOTOR GOLD FLUIDTEC ATF 3000	ZF002312
BARDAHL ASIA PACIFIC PTE LTD, SINGAPORE/SG	SYNMAXTRAN-HD	ZF002246
BAYWA AG MÜNCHEN, MÜNCHEN/DE	TECTROL ATF 4000	ZF001907
BAYWA AG MÜNCHEN, MÜNCHEN/DE	TECTROL ATF 3000	ZF001908
BELGIN MADENI YAGLAR TIC. VE SAN. A.S., KOCAELI/TR	LUBEX ATF-II	ZF001031
BELGIN MADENI YAGLAR TIC. VE SAN. A.S., KOCAELI/TR	LUBEX ATF-III KYS	ZF002255
BELGIN MADENI YAGLAR TIC. VE SAN. A.S., KOCAELI/TR	LUBEX ATF-III KYS	ZF002293
BP PLC., LONDON/GB	BP AUTRAN DX III	ZF000194
BP PLC., LONDON/GB	BP AUTRAN LTF	ZF000195
BP PLC., LONDON/GB	BP AUTRAN MBX	ZF000196
BP PLC., LONDON/GB	BP AUTRAN SYN 295	ZF000197
BUCHER AG LANGENTHAL, LANGENTHAL/CH	ATF SUPER	ZF000593
BUCHER AG LANGENTHAL, LANGENTHAL/CH	ATF VZ	ZF003369
CASTROL LTD, LONDON/GB	CASTROL TRANSMAX DEX III MULTIVEHICLE	ZF000220
CASTROL LTD, LONDON/GB	CASTROL TRANSMAX Z	ZF000221
CASTROL LTD, LONDON/GB	CASTROL ATF DEX II MULTIVEHICLE	ZF000223
CASTROL LTD, LONDON/GB	CASTROL TRANSYND	ZF000226
CASTROL LTD, LONDON/GB	CASTROL TRANSMAX ATF Z	ZF002158
CASTROL LTD, LONDON/GB	TES-295 SYN TRANSMISSION FLUID	ZF002298
CEPSA COMERCIAL PETRÓLEO S.A.U., MADRID/ES	CEPSA ATF 3000 S	ZF000386
CEPSA COMERCIAL PETRÓLEO S.A.U., MADRID/ES	CEPSA ATF 70	ZF001939
CEPSA COMERCIAL PETRÓLEO S.A.U., MADRID/ES	CEPSA ATF 2000S	ZF002040
CHEVRON LUBRICANTS, SAN RAMON, CA/US	HAVOLINE ATF MERCON V	ZF000101
CHEVRON LUBRICANTS, SAN RAMON, CA/US	TEXAMATIC B	ZF001202
CHEVRON LUBRICANTS, SAN RAMON, CA/US	SYNTHETIC AUTOMATIC TRANSMISSION FLUID HEAVY DUTY	ZF001219
CHEVRON LUBRICANTS, SAN RAMON, CA/US	TEXAMATIC 4291	ZF001574
CHEVRON LUBRICANTS, SAN RAMON, CA/US	DELO SYN ATF HD	ZF001664
CHEVRON LUBRICANTS, SAN RAMON, CA/US	HAVOLINE MULTI-VEHICLE ATF	ZF001714
COMERCIAL ROSHFRANS, S.A. DE C.V., MEXICO, D.F./MX	ATF ALLPOWER MULTIVEHICULOS	ZF000385
ENI S.P.A., ROME/IT	AGIP ATF II D	ZF000925
ENI S.P.A., ROME/IT	AGIP DEXRON III	ZF000927
EUROL B.V., NJIVERDAL/NL	EUROL ATF IIIIF	ZF000387
EXOL LUBRICANTS LTD, WEDNESBURY/GB	AUTOTRANS ELC	ZF001685
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL ATF 220	ZF000033
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL ATF D 21065	ZF000038
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL ATF SHC	ZF000039
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL ATF 320	ZF000043
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL ATF LT 71141	ZF000044
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC SYNTHETIC ATF	ZF001234
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC 1 ATF	ZF001827
FABRIKA MAZIVA FAM AD, KRUSÉVAC/RŠ	ATF DII	ZF001187
FUCHS PETROLUB SE, MANNHEIM/DE	STATOIL TRANSWAY PS DX III	ZF000487
FUCHS PETROLUB SE, MANNHEIM/DE	FUCHS TITAN ATF 5005	ZF000717
FUCHS PETROLUB SE, MANNHEIM/DE	FUCHS TITAN ATF 3000	ZF000720
FUCHS PETROLUB SE, MANNHEIM/DE	FUCHS TITAN ATF 4000	ZF000728
FUCHS PETROLUB SE, MANNHEIM/DE	PENTOSIN ATF 1	ZF000734
FUCHS PETROLUB SE, MANNHEIM/DE	PENTOSIN ATF IIIH	ZF000783
FUCHS PETROLUB SE, MANNHEIM/DE	TRANSWAY ATF ULTRA	ZF001330
FUCHS PETROLUB SE, MANNHEIM/DE	TRANSWAY ATF EXTRA	ZF001332
FUCHS PETROLUB SE, MANNHEIM/DE	FUCHS TITAN ATF 5500	ZF001797
GAZPROMNEFT-LUBRICANTS, MOSCOW/RU	G-BOX ATF DXII	ZF001955
GAZPROMNEFT-LUBRICANTS, MOSCOW/RU	G-BOX ATF DX III	ZF001956
GAZPROMNEFT-LUBRICANTS, MOSCOW/RU	G-BOX ATF DX III	ZF002221
GRUPA LOTOS S.A., GDANSK/PL	LOTOS ATF II D	ZF000362
GRUPA LOTOS S.A., GDANSK/PL	LOTOS ATF SUPER III G	ZF000620
GRUPA LOTOS S.A., GDANSK/PL	LOTOS ATF II D	ZF001043
GRUPA LOTOS S.A., GDANSK/PL	LOTOS ATF IIIIG	ZF001093
GULF OIL INTERNATIONAL, MUMBAI/IN	GULF ATF DX III H	ZF000078
GULF OIL INTERNATIONAL, MUMBAI/IN	GULF ATF DX II	ZF001099
GULF OIL INTERNATIONAL, MUMBAI/IN	GULF ATF PC	ZF001349
HERMANN BANTLEON GMBH, ULM/DE	AVILUB FLUID ATZ 295	ZF002288
HI-TEC OILS, SMITHFIELD/AU	MULTITRANS PLUS ATF	ZF001669
HUILES BERLIET S.A., SAINT-PIERRE/FR	RTO STARMATIC 3	ZF001259
HUILES BERLIET S.A., SAINT-PIERRE/FR	RTO STARMATIC S3	ZF001579
IGOL FRANCE, AMIENS/FR	ATF 700	ZF001833
IGOL FRANCE, AMIENS/FR	IGOL ATF 430	ZF002315
INA MAZIVA LTD., ZAGREB/HR	INA ATF SUPER	ZF000248

Manufacturer (04D)

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
 IPIRANGA PRODUTOS DE PETRÓLEO SA, RIO DE JANEIRO/BR
 KOCÁK PETROL URUNLERI SAN.VE TIC.LTD.STI, KOCAELI/TR
 KOCÁK PETROL URUNLERI SAN.VE TIC.LTD.STI, KOCAELI/TR
 KUWAIT PETROLEUM INTERNATIONAL LUBRICANT, ANTWERP/NL
 KUWAIT PETROLEUM INTERNATIONAL LUBRICANT, ANTWERP/NL
 KUWAIT PETROLEUM INTERNATIONAL LUBRICANT, ANTWERP/NL
 KUWAIT PETROLEUM INTERNATIONAL LUBRICANT, ANTWERP/NL
 KUWAIT PETROLEUM INTERNATIONAL LUBRICANT, ANTWERP/NL
 KUWAIT PETROLEUM INTERNATIONAL LUBRICANT, ANTWERP/NL
 LIEBHERR HYDRAULIKBAGGER GMBH, KIRCHDORF/DE
 LIQUI MOLY GMBH, ULM/DE
 LUBRICATING SPECIALTIES COMPANY, PICO RIVERA/US
 LUBRICATION ENGINEERS, INC., FORT WORTH, TEXAS/US
 MEGUIN GMBH & CO. KG, SAAARLOUIS/DE
 MOL-LUB KFT, ALMASFUZITO/HU
 MOL-LUB KFT, ALMASFUZITO/HU
 MOL-LUB KFT, ALMASFUZITO/HU
 MOL-LUB KFT, ALMASFUZITO/HU
 MORRIS LUBRICANTS, SHREWSBURY/GB
 MOTUL SA, AUBERVILLIERS/FR
 MOTUL SA, AUBERVILLIERS/FR
 OILFINO MINERALÖL GMBH, PRISDORF/DE
 OILFINO MINERALÖL GMBH, PRISDORF/DE
 OOO "LLK-INTERNATIONAL", MOSCOW/RU
 OOO "LLK-INTERNATIONAL", MOSCOW/RU
 OOO "LLK-INTERNATIONAL", MOSCOW/RU
 OOO "LLK-INTERNATIONAL", MOSCOW/RU
 OOO "LLK-INTERNATIONAL", MOSCOW/RU
 OOO "LLK-INTERNATIONAL", MOSCOW/RU
 OOO "LLK-INTERNATIONAL", MOSCOW/RU
 OOO "LLK-INTERNATIONAL", MOSCOW/RU
 ORLEN OIL SP. Z O.O., KRAKOW/PL
 ORLEN OIL SP. Z O.O., KRAKOW/PL
 OY TEBOIL AB, HELSINKI/FI
 OY TEBOIL AB, HELSINKI/FI
 PAKELO MOTOR OIL, SAN BONIFACIO (VR)/IT
 PAKELO MOTOR OIL, SAN BONIFACIO (VR)/IT
 PAKELO MOTOR OIL, SAN BONIFACIO (VR)/IT
 PAKELO MOTOR OIL, SAN BONIFACIO (VR)/IT
 PAKELO MOTOR OIL, SAN BONIFACIO (VR)/IT
 PANOLIN AG, MADETSWIL/CH
 PETRO-CANADA LUBRICANTS INC., MISSISSAUGA, ONTARIO/CA
 PETROBRAS DISTRIBUIDORA S.A., DUQUE DE CAXIAS/BR
 PETROGAL S.A., LISBOA/PT
 PETROGAL S.A., LISBOA/PT
 PETROGAL S.A., LISBOA/PT
 PETROL OFISI A.S., ISTANBUL/TR
 PETROMIN CORPORATION, JEDDAH/SA
 PETROMIN CORPORATION, JEDDAH/SA
 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
 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
 RN-LUBRICANTS, LLC, MOSCOW/RU
 ROLF LUBRICANTS GMBH, LEVERKUSEN/DE
 ROLF LUBRICANTS GMBH, LEVERKUSEN/DE
 ROWE MINERALÖLWERK GMBH, WORMS/DE
 ROWE MINERALÖLWERK GMBH, WORMS/DE
 SASOL OIL, RANDBURG/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
 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
 SINOPEC LUBRICANT CO., LTD., BEIJING/CN
 SINOPEC LUBRICANT CO., LTD., BEIJING/CN
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE

Trade name (04D)

INA ATF DX III
 INA ATF DX IID
 INA ATF EKSTRA
 INA ATF DX IIIH
 UNIMATIC D-II PLUS
 ISAMATIC V
 SPEEDOL ATF DEXRON II
 ATF DEXRON S III
 Q8 AUTO 20
 Q8 AUTO 14
 Q8 AUTO 14
 Q8 AUTO 15 ED
 Q8 AUTO 15
 LIEBHERR HYDRAULIC-GEAR ATF
 LIQUI MOLY ATF DEXRON IID
 MV TYPE 20C ATF
 LE 1150
 MEGOL HYDRAULIKOEL ATF DEXRON II D
 MOL ATF SYNT
 MOL ATF 3G
 MOL ATF
 MOL ATF SYNT 3H
 MULTITRANS ACV
 MOTUL DEXRON III
 MOTUL DEXRON II D
 OILFINO SPONTE ATF II
 OILFINO SPONTE ATF III
 LUKOIL ATF SYNTH HD
 LUKOIL ATF SYNTH MULTI
 LUKOIL ATF
 LUKOIL ATF SYNTH MN Z3
 LUKOIL ATF IID
 LUKOIL ATF III
 LUKOIL ATF S
 LUKOIL ATF SYNTH MULTI
 HIPOL ATF II D
 HIPOL ATF II E
 TEBOIL FLUID ES-MAX
 TEBOIL FLUID E
 AUXON II E
 DX FLUID II TS
 ATF XT III FLUID
 AUXON III PLUS
 ATF XT III FLUID PLUS
 PANOLIN ATF SUPER VTX
 HEAVY DUTY SYNTHETIC BLEND ATF
 LUBRAX ATF HD
 GALP TRANSMATIC D II
 GALP TRANSMATIC D III
 GALP TRANSMATIC Z
 ATF DX-3
 PETROMIN ATF Z20 ECO
 PETROMIN ATF Z20 LD
 TUTELA TRANSMISSION ATF 120
 TUTELA TRANSMISSION G/A
 TUTELA TRANSMISSION STARFLUID
 TUTELA TRANSMISSION G/E
 AKROS MATIC
 ARBOR MTA
 TUTELA TRANSMISSION STARFLUID HD-ED
 TUTELA TRANSMISSION STARFLUID PS
 TUTELA TRANSMISSION ATF 90
 ATF D3 SILVER
 PRISTA ATF
 TRANSFLUID SYNTHETIC M-5
 RAVENOL DEXRON III H
 REPSOL MATIC ATF
 REPSOL MATIC ATF
 REPSOL MATIC ATF
 REPSOL MATIC III
 REPSOL MATIC LD ATF
 TNK ATF IID
 ROLF ATF IID
 ROLF ATF IIIG
 ROWE HIGHTEC ATF 9000
 ROWE HIGHTEC ATF 8000
 SYN TRANSMISSION OIL VI
 SHELL SPIRAX S2 ATF AX
 SHELL SPIRAX S6 ATF VM PLUS
 SHELL SPIRAX S6 ATF VM
 SHELL SPIRAX S6 ATF ZM
 SPIRAX S4 ATF HDX
 SINOPEC GREATWALL ATF III LD
 SINOPEC GREATWALL FULLY SYNTHETIC ATF HD S
 SINOPEC GREATWALL ATF HD S
 SINOPEC GREATWALL SYNTHETIC ATF HD
 SINOPEC GREATWALL ATF HD
 SRS WIOLIN ATF D
 SRS WIOLIN ATF III
 SRS WIOLIN ATF III MV

ZF approval number

ZF000390
 ZF000392
 ZF000410
 ZF002314
 ZF000079
 ZF000896
 ZF000979
 ZF001388
 ZF000083
 ZF000176
 ZF001991
 ZF002121
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 ZF002003
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 ZF000374
 ZF001371
 ZF001463
 ZF001483
 ZF001812
 ZF001360
 ZF003345
 ZF003346
 ZF003347
 ZF003348
 ZF000438
 ZF000439
 ZF002061

Manufacturer (04D)

TEDEX S.A., WARSZAWA/PL
 TEDEX S.A., WARSZAWA/PL
 TEDEX S.A., WARSZAWA/PL
 TEDEX S.A., WARSZAWA/PL
 TEXSA DO BRASIL LTDA, UMUARAMA/PR/BR
 TOTAL LUBRIFIANTS S.A., NANTERRE/FR
 TOTAL LUBRIFIANTS S.A., NANTERRE/FR
 TOTAL LUBRIFIANTS S.A., NANTERRE/FR
 TOTAL LUBRIFIANTS S.A., NANTERRE/FR
 TOTAL LUBRIFIANTS S.A., NANTERRE/FR
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 TOTAL LUBRIFIANTS S.A., NANTERRE/FR
 TOTAL LUBRIFIANTS S.A., NANTERRE/FR
 TOTAL LUBRIFIANTS S.A., NANTERRE/FR
 TOTAL LUBRIFIANTS S.A., NANTERRE/FR
 UNIL OPAL, SAUMUR/FR
 UNIL OPAL, SAUMUR/FR
 UNIX AUTO, BUDAPEST/HU
 VALVOLINE EUROPE, DORDRECHT/NL
 VALVOLINE EUROPE, DORDRECHT/NL
 VALVOLINE EUROPE, DORDRECHT/NL
 YORK LUBRICANTS - GINOUVES SAS, LA GARDE/FR
 ZF FRIEDRICHSHAFEN AG, FRIEDRICHSHAFEN/DE
 ZF FRIEDRICHSHAFEN AG, FRIEDRICHSHAFEN/DE

Trade name (04D)

TEDEX SYNTHETIC ATF
 TEDEX ATF III
 TEDEX ATF II D
 TEDEX ATF SYNTHETIC (S)
 TEXSA ATF SUPER
 ELF ELFMATIC G3
 GULF ATF HIGH TECH
 TOTAL FLUIDE XLD FE
 TOTAL FLUIDMATIC SYN
 ELF ELFMATIC G3 SYN
 TOTAL FLUIDE G3
 TOTAL FLUIDE II D
 ELF ELFMATIC G3
 TOTAL FLUIDE II D
 TOTAL FLUIDE II D
 TOTAL FLUIDE II D
 FLUIDE AT 42
 MATIC DX III
 MATIC D
 A.Z.MEISTERTEILE AUTOMATIKGETRIEBEÖL ATF
 VALVOLINE HEAVY DUTY ATF PRO ECO
 VALVOLINE HEAVY DUTY ATF PRO LD
 VALVOLINE HEAVY DUTY ATF PRO
 YORK 787
 ZF-LIFEGUARDFLUID 5
 ZF ECOFLUID A LIFE

ZF approval number

ZF001279
 ZF001350
 ZF002043
 ZF002213
 ZF001207
 ZF001152
 ZF001257
 ZF001464
 ZF001569
 ZF001582
 ZF001663
 ZF001668
 ZF001699
 ZF001723
 ZF001724
 ZF001725
 ZF002100
 ZF001010
 ZF001071
 ZF002192
 ZF001871
 ZF001872
 ZF001873
 ZF000597
 ZF001363
 ZF001671

Lubricant class 04E

Engine oil in accordance with specification

- API CD/CE/CF-4/CF/CG-4/CH-4/CI-4/CI-4 Plus/CJ-4

- API SF/SG/SH/SJ/SL/SM

- 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

Gear oil CLP

Viscosity grade: ISO VG 220

Manufacturer (04F)

CASTROL LTD, LONDON/GB
CHEVRON LUBRICANTS, SAN RAMON, CA/US
EXXONMOBIL CORPORATION, HOUSTON, TX/US

Trade name (04F)

CASTROL ALPHASYN HG 220
MEROPA 220
MOBILGEAR 600 XP 220

ZF approval number

ZF001508
ZF000811
ZF000852

Lubricant class 04G

Gear oil in accordance with specification:

- API GL-5 / MIL-L-2105D

- MIL-PRF-2105E

- SAE J2360

Viscosity grade: SAE 80W-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.

Lubricant class 04H

Gear oil CLP in accordance with DIN 51517-3

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

- ZF AT, TT, SDT - Gear box L-Drive: ISO VG 100
 - ZF AT, TT, SDT - Gear box Z-Drive: ISO VG 150
 - ZF TT 4000 CP, 5000 CP - Gear box und Power pack: ISO VG 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.

Lubricant class 04K

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

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

- SeaRex: ISO VG 32 / 46

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

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 04M

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

- ZF AT, TT, SDT L-Drive variants - Gear box part: ISO VG 100
- ZF AT, TT, SDT Z-Drive variants - Gear box part: ISO VG 150

Note:

For use of biodegradable oils see remark 3 and 4 page 2

Manufacturer (04M)

CASTROL LTD, LONDON/GB
 CASTROL LTD, LONDON/GB
 EXXONMOBIL CORPORATION, HOUSTON, TX/US
 EXXONMOBIL CORPORATION, HOUSTON, TX/US
 KLÜBER LUBRICATION, MUNICH/DE
 KLÜBER LUBRICATION, MUNICH/DE
 PANOLIN AG, MADETSWIL/CH
 PANOLIN AG, MADETSWIL/CH
 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 BIOSTAT 100
 CASTROL BIOSTAT 150
 MOBIL SHC AWARE GEAR 100
 MOBIL SHC AWARE GEAR 150
 KLÜBERBIO EG 2-100
 KLÜBERBIO EG 2-150
 PANOLIN EP GEAR SYNTH 100
 PANOLIN EP GEAR SYNTH 150
 SHELL NATURELLE S4 GEAR FLUID 100
 SHELL NATURELLE S4 GEAR FLUID 150
 BIOGEAR XP 100
 BIOGEAR XP 150

ZF approval number

ZF002122
 ZF002203
 ZF002281
 ZF002282
 ZF001732
 ZF001733
 ZF002000
 ZF002001
 ZF001792
 ZF001793
 ZF002204
 ZF002265

Lubricant class 04P

Engine oil in accordance with specification

- API CD/CE/CF-4/CF/CG-4/CH-4/CI-4/CI-4 Plus/CJ-4

- API SF/SG/SH/SJ/SL/SM

- 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

Gear oil CLP

Viscosity grade: ISO VG 150

Manufacturer (04Q)

CASTROL LTD, LONDON/GB
KLÜBER LUBRICATION, MUNICH/DE
SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB

Trade name (04Q)

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

ZF approval number

ZF002094
ZF001733
ZF001793