



Axles for buses

List of lubricants TE-ML 12

Product group	Lubricant classes for service fills (1)
Axles, axle drive units, wheel heads and wheel hubs without further details	ZF-Ecofluid X / 12B / 12C / 12D / 12E
Low-floor offset axles AV 131 and AV 132 without multi-disc self-locking differentials	ZF-Ecofluid X / 12B / 12E (2)
Low-floor offset axles AV 131, other axles and axle drive units with multi-disc self-locking differentials	12C / 12D
Wheel bearings with individual mounts at the front and rear axles	Multipurpose grease classified KP2K-20 acc. to DIN 51825 or ISO-L-XBCHB2 acc. to ISO 6743-9 (see below, note on greasing points)
Compact bearings (hub unit) in the wheel heads at the front and rear axles	Fuchs Renolit LX-PEP 2 Fuchs Renolit LX-N EP 2 Fuchs Renolit LX-NHU 2

(1) Refer to the following pages for approved commercial products.

(2) In countries, where oils of the lubricant classes 12E and 12B are not available, the oils of the lubricant classes 12C and 12D - only admissible for these exceptional cases - may be used.

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 (basic oil API Group 1, 2, 3 or 4, EP additives, lithium saponified, temperature use limits min. between -20 and +120° C, NLGI-Class 2).

Refer to ZF Service Information 54/01d for recommended greases.

Only the grease grades listed in the table may be used for grease lubrication of compact bearings (hub unit) in wheel heads (see above).

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.

Caution: Pay due attention to the note on oil level check, oil change intervals, and low temperature limits on Page 2.

The list of lubricants TE-ML 12, **Edition 01.01.2010** 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.

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ZF Passau GmbH
D-94030 Passau

Oil level check and oil change intervals

Lubricant class	Operating conditions	Oil level check	Oil change intervals
ZF Ecofluid X, 12E, 12B	Line operation and tourist traffic Normal operation	With each engine-oil change	150.000 km / 3 years (3)
	Line operation and tourist traffic Hot-country operation (4)	With each engine-oil change	60.000 km / 1 year (3)
12C, 12D	Line operation and tourist traffic	With each engine-oil change	60.000 km / 1 year (3)

(3) Oil change required, depending on what occurs first.

(4) The denomination „hot country use“ is derived from the area where the vehicle is used, rather than from a country in the sense of a state.

Regarding ZF units, we say Hot country use when:

1. the monthly average temperature exceeds 25°C in more than 2 months within a year

2. or if temperatures rise above 40°C on more than 7 days in a year

Examples for possible countries or regions are:

America: Mexico, USA (South and deserts)

Whole Africa (without South Africa)

Middle East: Bangladesh, India (regional), Pakistan, Afghanistan, Sri Lanka

Near East: Iran, Iraq, Kuwait, Bahrain, Oman, Qatar, Saudi-Arabia, United Arab Emirates, Yemen, Israel, Lebanon, Syria, Egypt, Jordan

Australia (deserts)

China (deserts)

Grease change intervals

Product group	Grease change interval
Wheel bearings with individual mounts at the front and rear axles	500.000 km / 2 years (5)
Compact bearings (hub unit) in the wheel heads at the front and rear axles	500.000 km / 4 years (5)

(5) Grease change required, depending on what occurs first.

Low temperatures limits

Viscosity grades	Lubricant classes	Use at outside temperatures above
SAE 75W-90, 75W-110, 75W-140	12B, 12D, 12E	-40°C
SAE 80W-90, 80W-110, 80W-140	ZF Ecofluid X, 12C, 12E	-26°C
SAE 85W-90, 85W-110, 85W-140	12C, 12E	-12°C
SAE 90	12C, 12E	-5°C

Lubricant classes and approved trade products

Lubricant class 12B

Transmission oil (base oil synthetic)

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

Manufacturer (12B)

ADDINOL LUBE OIL GMBH, LEUNA/D
 AGIP SCHMIERTECHNIK GMBH, WÜRZBURG/D
 AGIP SCHMIERTECHNIK GMBH, WÜRZBURG/D
 ARAL AG, BOCHUM/D
 ARAL AG, BOCHUM/D
 ARAL AG, BOCHUM/D
 AVIA MINERALÖL-AG, MÜNCHEN/D
 BAYWA AG, MÜNCHEN/D
 BP INTERNATIONAL, PANGBOURNE, READING/GB
 BP INTERNATIONAL, PANGBOURNE, READING/GB
 BUCHER AG LANGENTHAL, LANGENTHAL/CH
 BUCHER AG LANGENTHAL, LANGENTHAL/CH
 CASTROL INTERNATIONAL, PANGBOURNE READING/GB
 CASTROL INTERNATIONAL, PANGBOURNE READING/GB
 CEPESA LUBRICANTS S.A., MADRID/E
 CHEVRONTExACO, GHENT/B
 COGNIS DEUTSCHLAND GMBH, MONHEIM/D
 CONDAT LUBRIFIANTS, CHASSE SUR RHONE/F
 DE OLIEBRON B.V., ZWIJNDRECHT/NL
 DE OLIEBRON B.V., ZWIJNDRECHT/NL
 ENI S.P.A. REFINING & MARKETING DIVISION, ROME/I
 EXXON MOBIL CORPORATION, FAIRFAX, VIRGINIA/USA
 EXXON MOBIL CORPORATION, FAIRFAX, VIRGINIA/USA
 EXXON MOBIL CORPORATION, FAIRFAX, VIRGINIA/USA
 EXXON MOBIL CORPORATION, FAIRFAX, VIRGINIA/USA
 FUCHS PETROLUB AG, MANNHEIM/D
 FUCHS PETROLUB AG, MANNHEIM/D
 GINOUVES GEORGES SA, LA FARLEDE/F
 GINOUVES GEORGES SA, LA FARLEDE/F
 GRUPA LOTOS SA, GDANSK/PL
 GULF OIL INTERNATIONAL, PITTSBURG/USA
 HANDEL MIJ NOVIOL B.V., NIJMEGEN/NL
 HUILES BERLIET S.A., SAINT PRIEST/F
 IGOL FRANCE SA, AMIENS/F
 KROON-OIL B.V., ALMELO/NL
 KUWAIT PETROLEUM R&T B.V., EUROPOORT RT/NL
 LLK FINLAND OY, HAMINA/FIN
 LLK FINLAND OY, HAMINA/FIN
 MAZIVA ZAGREB D.O.O, ZAGREB/HR
 MEGUIN GMBH & CO. KG MINERALOELWERKE, SAARLOUIS/D
 MILLERS OILS LIMITED, BRIGHOUSE/GB
 MOTUL SA, AUBERVILLIERS CEDEX/F
 NESTE MARKKINOINTI OY, ESPOO/FIN
 NEW PROCESS AG, TUBACH/CH
 OEST, GEORG MINERALÖLWERK, FREUDENSTADT/D
 OK NEDERLAND, STAPHORST/NL
 OK NEDERLAND, STAPHORST/NL
 OMV REFINING & MARKETING GMBH, WIEN/A
 OMV REFINING & MARKETING GMBH, WIEN/A
 PAKELO MOTOR OIL S.R.L, SAN BONIFACIO (VR)/I
 PANOLIN AG, MADETSWIL/CH
 PANOLIN AG, MADETSWIL/CH
 PETROGAL S.A., LISBOA/P
 PETRONAS LUBRICANTS INTERN., KUALA LUMPUR/MAL
 REPSOL YPF LUBRICANTES Y ESPECIALIDADES, MADRID/E
 S.A.E.L., MADRID/E
 SHELL INTERNATIONAL PETROLEUM COMP LTD, LONDON/GB
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/D
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/D
 STRUB + CO AG, REIDEN/CH
 TOTAL LUBRIFIANTS S.A., PARIS/F
 TOTAL LUBRIFIANTS S.A., PARIS/F
 TOTAL LUBRIFIANTS S.A., PARIS/F
 TOTAL LUBRIFIANTS S.A., PARIS/F
 TOTAL LUBRIFIANTS S.A., PARIS/F

Trade name (12B)

ADDINOL GETRIEBEÖL GH 75W 90 SL, SAE 75W-90
 AGIP HLX, SAE 75W-90
 AGIP ROTRA TRUCK GEAR S, SAE 75W-90
 ARAL GETRIEBEÖL BS 75W-90
 ARAL GETRIEBEÖL SNA-C SAE 75W-90
 ARAL GETRIEBEÖL SNA-E 75W-90
 AVIA SYNTOGear FE 75W-90 EP
 TECTROL SYNTOGear MM 7590
 BP ENERGEGear SHX-M SAE 75W-90
 ENERGEGear SHX-M SAE 75W-90
 MOTOREX PENTA TL
 MOTOREX UNISYNT TX
 CASTROL DYNADrive PLUS 75W90
 CASTROL SAF-XO SAE 75W-90
 CEPESA TRANSMISIONES EP FE+LD 75W-90
 MULTIGear S 75W-90
 COGNIS EMGARD UAF 4209, SAE 75W-90
 GEAR SLX 75W140
 TOR UNI GEAR 75W110 LD
 TOR UNIGear 75W90 LD
 ROTRA LSX 75W-90
 MOBIL DELVAC SYNTHETIC GEAR OIL 75W-90
 MOBIL DELVAC SYNTHETIC GEAR OIL 80W-140
 MOBILUBE 1 SHC 75W-90
 MOBILUBE SHC 75W-90
 FUCHS TITAN CYTRAC SL SAE 75W-90
 TITAN CYTRAC HSY SAE 75W-90
 YORK 896
 YORK 896 75W110
 TITANIS SUPER GL-5 75W90
 GULF SYNGear 75W-90
 KENDALL TOTAL Drive LINE ED 75W90
 RTO LONGEVIA TCX ECO 75W-90
 SYNTHEGear SAE75W90
 TRANSMISSION OIL SP 1011
 Q8 TRANS XGS SAE 75W-90
 TEBOil HYPOID SAE 75W-140
 TEBOil HYPOID SAE 75W-90
 INA HIPENOL SHD 75W-90
 MEGOL GETRIEBEOEL TRUCK-SYNTH SAE 75W-90
 SYNTRAN FE
 MOTUL GEAR SYNT TDL 75W-90
 NESTE HYPOIDI TDL S 75W-90
 GEAROil SYNTH
 OEST SYNTH GETRIEBEÖL SAE 75W-90
 OK UNI-CARDAN OIL LD-SAE 75W/90
 QUINTOL TRANSMISSION OIL VS-45 SAE 75W/90
 OMV GEAR OIL BSX SAE 75W-90
 OMV UNIGear S SAE 75W-90
 PAKELO GLOBAL MULTIGear TS SAE 75W/90
 PANOLIN SUPER DUTY SYNTH 75W/140
 PANOLIN SUPER DUTY SYNTH 75W/90
 GALP TRANSVEX TDL 75W90
 TUTELA TRUCK FE-AXLE (75W-90)
 CARTAGO FE LD 75W90
 GULF SYTHETIC GEAR LUBRICANT 75W-90
 SHELL SPIRAX ASX 75W-90
 SRS GETRIEBEFLUID AFS
 SRS GETRIEBEFLUID BOS
 VULCOGear SYNT SGX 75W-90
 FINA PONTONIC FDL 75W-90
 TOTAL TRANSMISSION BM 75W-90
 TOTAL TRANSMISSION SYN FE 75W-90
 TRANSELF BM 75W-90
 TRANSELF SYNTHESE FE 75W-90

VALVOLINE EUROPE, DORDRECHT/NL
VIAL OIL LTD., MOSCOW/RUS
YACCO, ST PIERRE LES ELBEUF/F
ZELLER + GMELIN GMBH & CO., EISLINGEN/D

SYNPOWER GEAR OIL TDL 75W-90
CONSOL TRANS LUX SAE 75W-90
BVX 1000
DIVINOL SYNTHOGEAR SL 75W-90

Lubricant class 12C

Transmission oil with limited-slip additives (base oil mineral)

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

Manufacturer (12C)

ADDINOL LUBE OIL GMBH, LEUNA/D
 ADDINOL LUBE OIL GMBH, LEUNA/D
 ARAL AG, BOCHUM/D
 AVIA MINERALÖL-AG, MÜNCHEN/D
 BAYWA AG, MÜNCHEN/D
 BAYWA AG, MÜNCHEN/D
 BLASER SWISSLUBE AG, HASLE-RÜEGSAU/CH
 BP INTERNATIONAL, PANGBOURNE, READING/GB
 BP INTERNATIONAL, PANGBOURNE, READING/GB
 BUCHER AG LANGENTHAL, LANGENTHAL/CH
 CASTROL INTERNATIONAL, PANGBOURNE READING/GB
 CASTROL INTERNATIONAL, PANGBOURNE READING/GB
 CHEVRON BRASIL LTDA., RIO DE JANEIRO/BRAZIL
 CHEVRONTEXACO, GHENT/B
 CHEVRONTEXACO, GHENT/B
 CHEVRONTEXACO, SYDNEY/AUS
 CLAAS KGAA MBH, HARSEWINKEL/D
 ENGEN PETROLEUM LTD., CAPE TOWN/ZA
 ENI S.P.A. REFINING & MARKETING DIVISION, ROME/I
 EXXON MOBIL CORPORATION, FAIRFAX, VIRGINIA/USA
 EXXON MOBIL CORPORATION, FAIRFAX, VIRGINIA/USA
 FINKE MINERALÖLWERK GMBH, VISSSELHÖVEDE/D
 FUCHS PETROLUB AG, MANNHEIM/D
 GAZPROMNEFT-ONPZ, OMSK/RUS
 GRUPA LOTOS SA, GDANSK/PL
 GRUPA LOTOS SA, GDANSK/PL
 GS CALTEX CORPORATION, SEOUL/ROK
 GULF OIL INTERNATIONAL, PITTSBURG/USA
 HANDEL MIJ NOVIOL B.V., NIJMEGEN/NL
 HINDUSTAN PETROLEUM CORP LTD., MUMBAI/IND
 HUILES BERLIET S.A., SAINT PRIEST/F
 INDIAN OIL CORPORATION LTD., MUMBAI/IND
 INDIAN OIL CORPORATION LTD., MUMBAI/IND
 KOMPRESSOL-OEL VERKAUFS GMBH, KÖLN/D
 KROON-OIL B.V., ALMELO/NL
 KUWAIT PETROLEUM R&T B.V., EUROPOORT RT/NL
 LIEBHERR HYDRAULIKBAGGER GMBH, KIRCHDORF/D
 LLK FINLAND OY, HAMINA/FIN
 LUBRICANT OIL COMPANY, SINOPEC, BEIJING/CN
 MAZIVA ZAGREB D.O.O, ZAGREB/HR
 MINERALÖL-RAFFIN. DOLLBERGEN, UETZE-DOLLBERGEN/D
 MOL-LUB KFT., ALMÁSFÜZITŐ/H
 MOL-LUB KFT., ALMÁSFÜZITŐ/H
 NORTHLAND PRODUCTS COMPANY, WATERLOO/USA
 NOVA STILMOIL SPA, MODENA/I
 OEST, GEORG MINERALÖLWERK, FREUDENSTADT/D
 OK NEDERLAND, STAPHORST/NL
 OK NEDERLAND, STAPHORST/NL
 OMV REFINING & MARKETING GMBH, WIEN/A
 PAKELO MOTOR OIL S.R.L, SAN BONIFACIO (VR)/I
 PAKELO MOTOR OIL S.R.L, SAN BONIFACIO (VR)/I
 PANOLIN AG, MADETSWIL/CH
 PETROGAL S.A., LISBOA/P
 PETRONAS LUBRICANTS INTERN., KUALA LUMPUR/MAL
 PETRONAS LUBRICANTS INTERN., KUALA LUMPUR/MAL
 PETRONAS LUBRICANTS INTERN., KUALA LUMPUR/MAL
 PETRONAS LUBRICANTS INTERN., KUALA LUMPUR/MAL
 PTT PUBLIC COMPANY LIMITED, BANGKOK/TH
 RAVENSBERGER SCHMIERSTOFFVERTRIEB GMBH, WERTHER/D
 S.A.E.L., MADRID/E
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/D
 SWD LUBRICANTS GMBH & CO. KG, DUISBURG/D
 SWD LUBRICANTS GMBH & CO. KG, DUISBURG/D
 TOTAL LUBRIFIANTS S.A., PARIS/F
 TOTAL LUBRIFIANTS S.A., PARIS/F
 TOTAL LUBRIFIANTS S.A., PARIS/F
 TOTAL LUBRIFIANTS S.A., PARIS/F

Trade name (12C)

ADDINOL GETRIEBEÖL GH 80W-90 LS
 ADDINOL GETRIEBEÖL GH 85W-90 LS
 ARAL GETRIEBEÖL HYP LS 85W-90
 AVIA HYPOID 90 LS
 BAYWA GETRIEBEÖL HYPOID LS 90
 TECTROL MULTIGEAR LS 90
 GETRIEBEÖL LS 85W90
 BP ENERGEAR LIMSLIP 90
 FRONTOL GETRIEBEÖL LS 90
 MOTOREX GEAR OIL UNIVERSAL LS 80W/90
 CASTROL HYPOY LS 90
 CASTROL LSX
 GEARTEX LS 85W140
 GEARTEX LS 80W-90
 GEARTEX LS 85W-90
 CALTEX GEAR OIL ZF SAE 80W-90
 CLAAS AGRISHIFT BLS 90
 ENGEN GEARLUBE EP 90 LS - SAE 80W-90
 AGIP ROTRA MP/S, SAE85W-90
 ESSO GEAR OIL LSA 85W-90
 MOBILUBE LS 85W-90
 AVIATICON HYPOID LS 90
 TITAN GEAR LS 90
 G-TRUCK LS 80W-90
 LOTOS TITANIS LS GL-5 SAE 85W/140
 LOTOS TITANIS LS GL-5 SAE 80W/90
 DIC LS GEAR OIL 80W/90
 GULF GEAR LS 90
 KENDALL SPECIAL LIMITED SLIP AXLE GEAR LUBE 80W/90
 HP GEAR OIL LS 90
 RTO EP 90 GL
 SERVO GEAR SUPER LS 80W-90
 SERVO GEAR SUPER LS 90
 KOMPRESSOL-HYPOID LS SAE 90
 GEAR OIL LS 80W-90
 Q8 T 45 SAE 90
 LIEBHERR GEAR BASIC 90 LS
 TEBOIL HYPOID LS SAE 80W-90
 SINOPEC ZLS 85W/90 GL-5
 INA HIPENOL GTL LS 90
 PENNASOL LIMITED SLIP HYPOID GEAR OIL LS SAE 90
 MOL HYKOMOL LS 85W-90
 MOL HYKOMOL LS 85W140
 POSI-GRIP JDZF 80W90
 GEARING WONDER LS SAE 85W90
 OEST GETRIEBEÖL HYPOID LS 90
 OK CARDAN OIL MP-B-LS SAE 80W/90
 QUINTOL CARDAN OIL LS-90
 OMV GEAR OIL LS SAE 85W-90
 PAKELO UNIVERSAL GEAR EP/LS SAE 85W/140
 PAKELO UNIVERSAL GEAR EP/LS SAE 80W/90
 PANOLIN SUPER DUTY LS 90
 GALP LS 90
 AKCELA AXLEPOWER (80W90)
 AMBRA AXF 80W90
 AMBRA STF (80W90)
 TUTELA W90/LS (SAE 80W-90)
 PTT LIMITED SLIP (SAE 80W-90)
 RAVENOL SPERRDIFF.-GETR.-OEL LS 90
 GULF LS REAR AXLE OIL 80W-90
 SRS WIOLIN RSH
 SWD SYNKROL 5 LS SAE 80W90
 SWD SYNKROL 5 LS SAE 85W90
 ELF TRACTELF BLS 90
 FINA TRANSFLUID LS 80W-90
 TOTAL DYNATRANS DA 80W-90
 TOTAL DYNATRANS DA 85W-140

TOTAL LUBRIFIANTS S.A., PARIS/F
UNIL OPAL, SAUMUR CEDEX/F
VOLVO CONSTRUCTION EQUIPMENT, ESKILSTUNA/S
YACCO, ST PIERRE LES ELBEUF/F

TOTAL DYNATRANS LS 80W-90
UNIL OPAL GEAR AB-EP SAE 85W90
LIMITED SLIP GEAR OIL 85W-90
BVX LS 200

Lubricant class 12D

Transmission oil with limited-slip additives (base oil synthetic)

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

Manufacturer (12D)

AGIP SCHMIERTECHNIK GMBH, WÜRZBURG/D

ARAL AG, BOCHUM/D

AVIA MINERALÖL-AG, MÜNCHEN/D

BP INTERNATIONAL, PANGBOURNE, READING/GB

CASTROL INTERNATIONAL, PANGBOURNE READING/GB

EXXON MOBIL CORPORATION, FAIRFAX, VIRGINIA/USA

SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/D

TOTAL LUBRIFIANTS S.A., PARIS/F

Trade name (12D)

AGIP HLZ, SAE 75W-140

ARAL GETRIEBEÖL BS-LSX SAE 75W-140

AVIA HYPOID 75W-140 LSX

BP ENERGEAR SHX-ZR 75W-140

CASTROL SAF-XJ 75W-140

MOBIL GEARLUBE VS 500

SRS GETRIEBEFLUID BMS PLUS

TOTAL TRANSMISSION LS 75W-140

Lubricant class 12E

Transmission oil (base oil mineral or part-synthetic)

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

Manufacturer (12E)

ADDINOL LUBE OIL GMBH, LEUNA/D
 ARAL AG, BOCHUM/D
 ARAL AG, BOCHUM/D
 ARAL AG, BOCHUM/D
 AVIA MINERALÖL-AG, MÜNCHEN/D
 BAYWA AG, MÜNCHEN/D
 BAYWA AG, MÜNCHEN/D
 BP INTERNATIONAL, PANGBOURNE, READING/GB
 BP INTERNATIONAL, PANGBOURNE, READING/GB
 BP INTERNATIONAL, PANGBOURNE, READING/GB
 BP INTERNATIONAL, PANGBOURNE, READING/GB
 BP INTERNATIONAL, PANGBOURNE, READING/GB
 BUCHER AG LANGENTHAL, LANGENTHAL/CH
 CASTROL INTERNATIONAL, PANGBOURNE READING/GB
 CASTROL INTERNATIONAL, PANGBOURNE READING/GB
 CASTROL INTERNATIONAL, PANGBOURNE READING/GB
 CHEVRONTEXACO GLOBAL LUBRICANTS, SAN RAMON/USA
 CHEVRONTEXACO GLOBAL LUBRICANTS, SAN RAMON/USA
 CHEVRONTEXACO, GHENT/B
 CONDAT LUBRIFIANTS, CHASSE SUR RHONE/F
 CYCLON HELLAS S.A., MAROUSSI ATHENS/GR
 DAF TRUCKS N.V., EINDHOVEN/NL
 DEUTSCHE PENTOSIN WERKE GMBH, WEDEL/D
 ENI S.P.A. REFINING & MARKETING DIVISION, ROME/I
 ENI S.P.A. REFINING & MARKETING DIVISION, ROME/I
 ENI S.P.A. REFINING & MARKETING DIVISION, ROME/I
 ENI S.P.A. REFINING & MARKETING DIVISION, ROME/I
 EXXON MOBIL CORPORATION, FAIRFAX, VIRGINIA/USA
 EXXON MOBIL CORPORATION, FAIRFAX, VIRGINIA/USA
 FINKE MINERALÖLWERK GMBH, VISSLHÖVEDE/D
 FUCHS PETROLUB AG, MANNHEIM/D
 FUCHS PETROLUB AG, MANNHEIM/D
 FUCHS PETROLUB AG, MANNHEIM/D
 FUCHS PETROLUB AG, MANNHEIM/D
 GAZPROMNEFT-ONPZ, OMSK/RUS
 GENOL GMBH & CO., WIEN/A
 GINOUVES GEORGES SA, LA FARLEDE/F
 GINOUVES GEORGES SA, LA FARLEDE/F
 GINOUVES GEORGES SA, LA FARLEDE/F
 GRUPA LOTOS SA, GDANSK/PL
 GRUPA LOTOS SA, GDANSK/PL
 GULF OIL INTERNATIONAL, PITTSBURG/USA
 GULF OIL INTERNATIONAL, PITTSBURG/USA
 HUILES BERLIET S.A., SAINT PRIEST/F
 HUILES BERLIET S.A., SAINT PRIEST/F
 HUILES BERLIET S.A., SAINT PRIEST/F
 IGOL FRANCE SA, AMIENS/F
 IGOL FRANCE SA, AMIENS/F
 JOHN DEERE, WATERLOO/USA
 JOHN DEERE, WATERLOO/USA
 KUWAIT PETROLEUM R&T B.V., EUROPOORT RT/NL
 KUWAIT PETROLEUM R&T B.V., EUROPOORT RT/NL
 LIQUI MOLY GMBH, ULM/D
 LLK FINLAND OY, HAMINA/FIN
 MAZIVA ZAGREB D.O.O, ZAGREB/HR
 MEGUIN GMBH & CO. KG MINERALOELWERKE, SAARLOUIS/D
 MILLERS OILS LIMITED, BRIGHOUSE/GB
 MOL-LUB KFT., ALMÁSFÜZITŐ/H
 OEST, GEORG MINERALÖLWERK, FREUDENSTADT/D
 OMV REFINING & MARKETING GMBH, WIEN/A
 PAKELO MOTOR OIL S.R.L, SAN BONIFACIO (VR)/I
 PAKELO MOTOR OIL S.R.L, SAN BONIFACIO (VR)/I
 PAKELO MOTOR OIL S.R.L, SAN BONIFACIO (VR)/I
 PAKELO MOTOR OIL S.R.L, SAN BONIFACIO (VR)/I
 PAKELO MOTOR OIL S.R.L, SAN BONIFACIO (VR)/I
 PAKELO MOTOR OIL S.R.L, SAN BONIFACIO (VR)/I
 PAKELO MOTOR OIL S.R.L, SAN BONIFACIO (VR)/I

Trade name (12E)

ADDINOL GETRIEBEÖL GX 80 W 90 ML
 ARAL GETRIEBEOL EP PLUS 80W-90
 ARAL GETRIEBEÖL HYP SC 85W-140
 ARAL GETRIEBEOL SNA-D
 AVIA SYNTOGear FE 80W-90
 BAYWA SUPER 8090 MC
 TECTROL MULTIGEAR PLUS 8090
 BP ENERGEGear DL 80W-90
 BP ENERGEGear HT 80W-90
 BP ENERGEGear HYPO XL 80W-90
 ENERGEGear HT 85W140
 OJS FRONTOL GETRIEBEÖL FE 85W-140
 GEAR ZX TP SAE80W/90 GL4/5
 CASTROL DYNADrive 80W-90
 CASTROL HYPOID LONG DRAIN 80W-90
 CASTROL MULTIDrive 80W90
 CHEVRON RPM UNIVERSAL GEAR LUBRICANT SAE 80W-90
 CHEVRON RPM UNIVERSAL GEAR LUBRICANT SAE 85W-140
 MULTIGEAR 80W-90
 GEAR SLX 75W90
 CYCLON GEAR EP GL-5 80W90
 DAF SUPER 80W90
 PENTOSIN GETRIEBEÖL O-226 80W-90
 AGIP ROTRA MP/C 80W-90
 AGIP ROTRA MP/C 85W-140
 AGIP ROTRA TRUCK GEAR 85W-140
 ROTRA TRUCK GEAR 80W-90
 MOBILUBE HD-A PLUS 80W-90
 MOBILUBE S 80W-90
 AVIATICON FINKOGear SUPER 80W-90
 TITAN GEAR HYP LD SAE 80W-90
 TITAN SUPERGEAR 80W-90
 TITAN SUPERGEAR 85W-140
 TITAN SUPERGEAR MC 80W-90
 G-TRUCK GL-4/GL-5 80W-90
 GENOL GEAR-SYN 80W-90
 YORK 793 80W140
 YORK 793 80W90
 YORK 993
 TITANIS SUPER GL-5 80W/140
 TITANIS SUPER GL-5 80W/90
 GULF GEAR LD 80W-90
 GULF GEAR TDL 80W-90
 RTO LONGEVIA P ECO 80W-140
 RTO LONGEVIA P ECO 80W-90
 RTO LONGEVIA TC ECO 80W-90
 GEAR M 80W90
 LONG GEAR 80W90
 GL-5 GEAR LUBRICANT (80W-90)
 GL-5 GEAR LUBRICANT (85W-140)
 Q8 AXLE OIL XG SAE 80W-140
 Q8 GEAR OIL XG SAE 80W-90
 HYPOID GETRIEBEÖL TDL SAE 80W-90
 TEBOIL HYPOID SAE 80W-140
 INA HIPENOL TDL 80W-90
 MEGOL HYPOID-GETRIEBEOEL TDL SAE 80W-90
 SYNTRAN II
 MOL HYKOMOL ZF 80W-90
 OEST MEHRZWECK-GETRIEBEÖL FE SAE 80W-90
 OMV UNIGEAR SAE 80W-90
 PAKELO GLOBAL GEAR CBS SAE 75W/90
 PAKELO GLOBAL GEAR DLS SAE 85W/140
 PAKELO GLOBAL GEAR DLS SAE 85W/90
 PAKELO GLOBAL GEAR SA SAE 80W/90
 PAKELO GLOBAL GEAR SA SAE 85W/140
 PAKELO GLOBAL GEAR SA SAE 85W/90

PAKELO MOTOR OIL S.R.L, SAN BONIFACIO (VR)/I
PAKELO MOTOR OIL S.R.L, SAN BONIFACIO (VR)/I
PAKELO MOTOR OIL S.R.L, SAN BONIFACIO (VR)/I
PANOLIN AG, MADETSWIL/CH
PAZ LUBRICANTS & CHEMICALS, HAIFA/IL
PETRO-CANADA LUBRICANTS, MISSISSAUGA/CDN
PETRO-CANADA LUBRICANTS, MISSISSAUGA/CDN
PETRO-CANADA LUBRICANTS, MISSISSAUGA/CDN
PETRO-CANADA LUBRICANTS, MISSISSAUGA/CDN
PETROBRAS DISTRIBUIDORA S.A., DUQUE DE CAXIAS/BR
PETROGAL S.A., LISBOA/P
PETRONAS LUBRICANTS INTERN., KUALA LUMPUR/MAL
PETRONAS LUBRICANTS INTERN., KUALA LUMPUR/MAL
SEPAHAN OIL COMPANY, TEHRAN/IR
SHELL INTERNATIONAL PETROLEUM COMP LTD, LONDON/GB
SHELL INTERNATIONAL PETROLEUM COMP LTD, LONDON/GB
SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/D
STRUB + CO AG, REIDEN/CH
SWD LUBRICANTS GMBH & CO. KG, DUISBURG/D
TEDEX PRODUCTION SP.Z.O.O., TOMASZOW MAZOWIECKI/PL
TOTAL LUBRIFIANTS S.A., PARIS/F
TOTAL LUBRIFIANTS S.A., PARIS/F
TOTAL LUBRIFIANTS S.A., PARIS/F
TOTAL LUBRIFIANTS S.A., PARIS/F
TOTAL LUBRIFIANTS S.A., PARIS/F
TOTAL LUBRIFIANTS S.A., PARIS/F
VALVOLINE EUROPE, DORDRECHT/NL
VIAL OIL LTD., MOSCOW/RUS
ZELLER + GMELIN GMBH & CO., EISLINGEN/D
ZF FRIEDRICHSHAFEN AG, FRIEDRICHSHAFEN/D

PAKELO GLOBAL MULTIGEAR CBS
PAKELO GLOBAL MULTIGEAR CBS DLS
PAKELO GLOBAL MULTIGEAR SA SAE 80W/140
PANOLIN TOPGEAR 80W/90
PAZ GEAR LD 80W-90
TRAXON 80W-90
TRAXON 85W-140
TRAXON XL SB 80W-140
TRAXON XL SYNTHETIC BLEND 75W-90
LUBRAX GOLD SAE 85W/140
GALP TRANSVEX TDL 85W140
ARBOR TRW 90 (SAE 80W90)
TUTELA TRANSMISSION TRUCK W90/LA (SAE 80W-90)
SAMIN SPEEDY EPX
SHELL SPIRAX AX PLUS 80W-90
SHELL SPIRAX MX 80W-90
SRS GETRIEBEFLUID SML 80W-90
STRUB MULTIGEAR SGO 80W-90
SWD RHEINOL SYNKROL 5 SAE 80W90
TEDEX SUPER GEAR OIL (3343M) SAE 80W90
TOTAL TRANSMISSION MDL 80W-90
TOTAL TRANSMISSION RS FE 80W-140
TOTAL TRANSMISSION RS FE 80W-90
TOTAL TRANSMISSION XPM 80W-90
TRANSELF UNIVERSAL FE 80W-140
TRANSELF UNIVERSAL FE 80W-90
HP GEAR OIL GL-5 PLUS SAE 80W-90
CONSOL TRANS LUX SAE 80W-90
DIVINOL GEAR OIL STO SAE 80W-90
ZF-ECOFLUID X