



Axles and wheel heads for buses and trucks

List of lubricants TE-ML 12

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1. Axles and wheel heads for buses

Product group	Lubricant classes for service fills ⁽¹⁾
Axles A series, wheel heads RL series	ZF EcoFluid X SAE 80W-90 12B / 12E / 12M / 12N
Low-floor portal axles AV series	ZF EcoFluid X SAE 80W-90 12B / 12E / 12M / 12N ZF EcoFluid XL SAE 75W-85 12F
Low-floor portal axles AV 133 with efficiency package	ZF EcoFluid XL SAE 75W-85 12F
Grease-lubricated wheel bearings with individual mounts at the front and rear axles	12G
Compact bearings (hub unit) in the wheel heads at the front and rear axles	12H
General greasing points	12G
General greasing points Lubrication by means of centralized lubricating system	12P

2. Electric axles for buses

Product group	Lubricant classes for service fills ⁽¹⁾
AVE 130	ZF EcoFluid X SAE 80W-90 12L
Compact bearing (hub unit) in the wheel heads at the central and rear axles of the AVE 130	12H

The list of lubricants TE-ML 12, **edition 01.04.2026** 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

3. Axles for trucks

Product group	Lubricant classes for service fills ⁽¹⁾
APL 9000, APL 90	ZF EcoFluid X SAE 80W-90 12B / 12E / 12M / 12N / 12S ZF EcoFluid XL SAE 75W-85 12F
Compact bearing (hub unit) in the wheel heads at the front axles of the APL 90	12H
General greasing points	12G

4. Oil level check, oil and grease change intervals, breather maintenance, ZF diaphragm breather

4.1 Axles and wheel heads for buses (A, AV and RL series)

Lubricant class	Operating conditions	Oil level check	Oil change intervals and breather maintenance, ZF diaphragm breather ⁽⁴⁾	Oil change intervals and breather maintenance, ZF diaphragm breather ⁽⁴⁾ Hot-country operation ⁽³⁾
12B, 12E	Line operation City operation Suburban operation Coaches	With each engine-oil change	150.000 km / 100,000 miles / 3 years ⁽²⁾	60.000 km / 40,000 miles / 1 year ⁽²⁾
	Coaches and suburban operation for A 133 axles with ZF diaphragm breather		200.000 km / 120,000 miles / 3 years ⁽²⁾	100.000 km / 60,000 miles / 1 year ⁽²⁾
ZF EcoFluid X SAE 80W-90 12M, 12N	Line operation City operation Suburban operation Coaches		180.000 km / 110,000 miles / 3 years ⁽²⁾	120.000 km / 80,000 miles / 2 years ⁽²⁾
	Coaches and suburban operation for A 133 axles with ZF diaphragm breather		300.000 km / 180,000 miles / 3 years ⁽²⁾	200.000 km / 120,000 miles / 2 years ⁽²⁾
ZF EcoFluid XL SAE 75W-85 12F	Line operation City operation Suburban operation for low-floor portal axles AV series		180.000 km / 110,000 miles / 3 years ⁽²⁾	120.000 km / 80,000 miles / 2 years ⁽²⁾
	Line operation City operation Suburban operation for low-floor portal axles AV 133 with efficiency package		300.000 km / 180,000 miles / 5 years ⁽²⁾	180.000 km / 110,000 miles / 3 years ⁽²⁾

Grease class	Operating conditions	Check	Change interval
12H - Compact bearings (hub unit) in the wheel heads at the front and rear axles	Line operation Suburban operation	Refer to ZF operating instructions	500.000 km / 310,000 miles / 4 years ⁽²⁾
	Coaches		800.000 km / 500,000 miles / 6 years ⁽²⁾
	Wheel heads RL 55		Lifetime lubrication (Refer to ZF operating instructions)
12G - Grease-lubricated wheel bearings with individual mounts at the front and rear axles	Line operation Suburban operation Coaches		500.000 km / 310,000 miles / 2 years ⁽²⁾
12G - General greasing points	Line operation Suburban operation Coaches		Relubrication 80.000 km / 50,000 miles / 1 year ⁽²⁾ Axles as of manufacturing date 2025-03 120,000 km / 1 year ⁽²⁾
12P - General greasing points Lubrication by means of centralized lubricating system	Line operation Suburban operation Coaches	Regular check of all lubricating points for escaping fresh grease	Observe provisions of centralized lubricating system manufacturer

4.2 Electric axles for buses (AVE 130)

Lubricant class	Operating conditions	Oil level check	Oil change intervals
ZF EcoFluid X SAE 80W-90 12L	Line operation	Refer to ZF operating instructions	60.000 km / 40,000 miles / 1 year ⁽²⁾





Grease class	Operating conditions	Check	Change interval
12H - Compact bearing (hub unit) in the wheel heads at the central and rear axles of the AVE 130	Line operation	Refer to ZF operating instructions	500.000 km / 310,000 miles / 4 years ⁽²⁾

4.3 Axles for trucks (APL 9000, APL 90)

Lubricant class	Operating conditions	Oil level check	Oil change intervals
ZF EcoFluid X SAE 80W-90 12B, 12E, 12M, 12N, 12S ZF EcoFluid XL SAE 75W-85 12F	-	With each engine-oil change	Initial oil change after 10 000 km / 7,000 miles Subsequent oil change interval 120.000 km / 80,000 miles / 2 years ⁽²⁾

Grease class	Operating conditions	Check	Change interval
12H - Compact bearing (hub unit) in the wheel heads at the front axles of the APL 90	-	Refer to specifications provided by the vehicle manufacturer	500.000 km / 310,000 miles / 4 years ⁽²⁾
12G - General greasing points	-		Relubrication according to the specifications provided by the vehicle manufacturer

5. Low temperatures limits

Viscosity grades	Use at outside temperatures
SAE 75W-85, 75W-90, 75W-110, 75W-140	- 40°C 
SAE 80W-90, 80W-110, 80W-140	- 26°C 
SAE 85W-90, 85W-110, 85W-140	- 12°C 
SAE 90	- 5°C 

6. Explanation of footnotes and comments

Footnotes

- (1) **Refer to the following pages for approved commercial products.
Pay due attention to the note on oil level check, oil and grease change intervals, breather maintenance (ZF breather), and low temperature limits on Pages 2 and 3.**
When changing the oil type within one lubricant class or to another lubricant class, mixing of the new oil with the residual oil in the axle is permitted.
- (2) Change required, depending on what occurs first.
- (3) 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)
- (4) Change the filter insert on the ZF diaphragm breather at every oil change (see ZF Service Information 13/16d or 11/17)

Comments

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.

7. Lubricant classes and approved trade products

Lubricant class 12B

Transmission oil

Viscosity grades: SAE 75W-90

Manufacturer (12B)

CASTROL LTD, LONDON/GB
CASTROL LTD, LONDON/GB

Trade name (12B)

CASTROL TRANSMAX AXLE LONG LIFE 75W-90
CASTROL SAF-XO 75W-90

ZF approval number

ZF002142
ZF006097

Lubricant class 12E

Transmission oil

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

Manufacturer (12E)

ADDINOL LUBE OIL GMBH, LEUNA/DE
 AVIA AG, MÜNCHEN/DE
 BAPCO REFINING, AWALI/BH
 BAPCO REFINING, AWALI/BH
 BELGIN MADENI YAGLAR TIC. VE SAN. A.S., KOCAELI/TR
 CASTROL LTD, LONDON/GB
 CASTROL LTD, LONDON/GB
 CASTROL LTD, LONDON/GB
 CLASS KGAA MBH, HARSEWINKEL/DE
 CLASS KGAA MBH, HARSEWINKEL/DE
 CYCLON HELLAS SA, ATHENS/GR
 EKO ABBE, ATHENS/GR
 ENILIVE S.P.A., ROME/IT
 EXXONMOBIL CORPORATION, HOUSTON, TX/US
 FINKE MINERALÖLWERK GMBH, 27374 VISSSELHÖVEDE/DE
 FUCHS PETROLUB SE, MANNHEIM/DE
 FUCHS PETROLUB SE, MANNHEIM/DE
 FUCHS PETROLUB SE, MANNHEIM/DE
 FUCHS PETROLUB SE, MANNHEIM/DE
 GS CALTEX CORPORATION, SEOUL/KR
 HILL CORPORATION, SHYMKENT/KZ
 HUILES BERLIET S.A., SAINT-PRIEST/FR
 MOEVE COMMERCIAL S.A.U., MADRID/ES
 MOEVE COMMERCIAL S.A.U., MADRID/ES
 MOL-LUB KFT, ALMASFUZITO/HU
 ORLEN S.A., GDANSK/PL
 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
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 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
 PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY
 PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY
 PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY
 RAVENSBERGER SCHMIERSTOFFVERTRIEB GMBH, WERTHER/DE
 ROLF LUBRICANTS GMBH, LEVERKUSEN/DE
 S.I.R.A.L. SPA, NOLA NAPOLI/IT
 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
 SINGAPORE PETROLEUM COMPANY LIMITED, SINGAPORE/SG
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE
 TEXSA DO BRASIL LTDA, UMUARAMA/PR/BR
 TEXSA DO BRASIL LTDA, UMUARAMA/PR/BR
 TEXSA DO BRASIL LTDA, UMUARAMA/PR/BR
 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
 ZELLER+GMELIN GMBH&CO.KG, EISLINGEN/DE

Trade name (12E)

ADDINOL GETRIEBEÖL GX 80 W 90
 AVIA POWERTRAIN AX 85W-90
 SPAREX EP 90 GL-5
 SPAREX EP 80W-90 GL-5
 BELGIN LUBEX MITRAS AX EP PLUS 80W-90
 CASTROL AXLE EPX 80W-90
 CASTROL AXLE EPX 80W-90
 CASTROL TRANSMAX AXLE EPX 80W-90
 AGRISHIFT MT 80W-90
 AGRISHIFT MT 80W-90
 GEAR EP GL-5 80W-90
 EKO GEAROL-5 80W-90
 ENI ROTRA MP 80W-90
 MOBIL DELVAC MODERN AXLE OIL 80W-90 HDA
 AVIATICON HYPOID EP 80W-90
 FUCHS TITAN SUPERGEAR SAE 80W-90
 FUCHS AGRIFARM GEAR SAE 80W-90
 PENTOSIN GEAR SAE 80W-90
 TITAN SUPERGEAR PLUS SAE 80W-90
 KIXX GEARTEC X GL-5 80W-90
 FASTROIL MTF5 80W-90
 LONGEVIA HD 80W-90
 CEPESA TRANSMISIONES EP 80W-90
 MAN SUPER AXLE 342-M2
 MOL HYKOMOL ZF 80W90
 LOTOS TITANIS GL-5 80W-90
 MAXIGEAR EP-X 80W-90
 ARBOR TRW 90 (SAE 80W-90)
 AMBRA HYPOIDE 90 (SAE 80W-90)
 AKCELA GEAR 135H EP (SAE 80W-90)
 AKROS GEAR EP 90 (SAE 80W-90)
 TUTELA TRANSMISSION W90/LA (SAE 80W-90)
 ARBOR TRW 90 (SAE 80W-90)
 AMBRA HYPOIDE 90 (SAE 80W-90)
 TUTELA TRANSMISSION W 90/LA (SAE 80W-90)
 ARBOR TRW 90 (SAE 80W-90)
 AKCELA GEAR 135H EP (SAE 80W-90)
 AKROS GEAR EP 90 (SAE 80W-90)
 PETRONAS TUTELA AXLE 300 80W-90
 PETRONAS TUTELA AXLE 300 80W-90
 RAVENOL SLG SAE 80W-90
 ROLF TRANSMISSION M5 A 80W-90
 TRANSMISSION 80W-90 GL5
 SHELL SPIRAX S3 AX 80W-90
 SHELL SPIRAX S3 AX 80W-90
 SHELL SPIRAX S3 AX 80W-90
 SHELL SPIRAX S3 AX 80W-90
 SHELL SPIRAX S3 AX 80W-90
 SHELL SPIRAX S3 AX 80W-90
 SHELL SPIRAX S3 AX 80W-90
 GEARLUBE HG M2 SAE 80W-90
 SRS WIOLIN HL 5 SAE 80W-90
 SRS WIOLIN HL 5 SAE 85W-90
 TEXSA GEAR MULTI GL-5 90
 TEXSA GEAR MULTI GL-5 80W90
 MONTANA DYNAMIC TRACTOGEAR 5 80W90
 DYNATRANS HD 80W-90
 TRAXIUM AXLE 7 80W-90
 TRAXIUM AXLE 7 80W-90
 TRANSELF TYPE B 80W-90
 TRANSELF TYPE B 80W-90
 DYNATRANS HD 80W 90
 TRAXIUM AXLE 7 80W-90
 TRAXIUM AXLE 7 80W-90
 DIVINOL GETRIEBEÖL ST 80W90

ZF approval number

ZF003620
 ZF012196
 ZF002316
 ZF002317
 ZF011935
 ZF001320
 ZF001754
 ZF002163
 ZF008203
 ZF008233
 ZF001604
 ZF003351
 ZF000855
 ZF009835
 ZF012141
 ZF000647
 ZF003624
 ZF004809
 ZF010958
 ZF003553
 ZF003435
 ZF008396
 ZF000084
 ZF000966
 ZF001118
 ZF005949
 ZF001499
 ZF000007
 ZF000231
 ZF000232
 ZF000233
 ZF000516
 ZF001201
 ZF003638
 ZF003640
 ZF003641
 ZF003642
 ZF003658
 ZF003703
 ZF012051
 ZF005984
 ZF003629
 ZF006100
 ZF010960
 ZF010963
 ZF010962
 ZF010959
 ZF010961
 ZF008187
 ZF005976
 ZF001911
 ZF001912
 ZF001941
 ZF001942
 ZF003665
 ZF008196
 ZF008224
 ZF008225
 ZF008227
 ZF008231
 ZF008232
 ZF011486
 ZF011518
 ZF012095

Lubricant class 12F
Transmission oil
Viscosity grade: SAE 75W-85

Manufacturer (12F)	Trade name (12F)	ZF approval number
SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB ZF FRIEDRICHSHAFEN AG, FRIEDRICHSHAFEN/DE	SHELL SPIRAX S6 AZME 75W-85 ZF ECOFLUID XL SAE 75W-85	ZF004894 ZF003441

Lubricant class 12G

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

Lubricant class 12H

Lubricating grease for long-term lubrication of compact bearings (Hub Unit)

Manufacturer (12H)

FUCHS PETROLUB SE, MANNHEIM/DE
FUCHS PETROLUB SE, MANNHEIM/DE
ZF FRIEDRICHSHAFEN AG, FRIEDRICHSHAFEN/DE

Trade name (12H)

RENOLIT LX-PEP 2-OEM
RENOLIT LX-NHU 2 - OEM
ZF RENOLIT LX-PEP 2

ZF approval number

ZF012094
ZF012093
ZF012109

Lubricant class 12L

Transmission oil

Viscosity grades: SAE 75W-90 / 80W-90

Manufacturer (12L)

ADDINOL LUBE OIL GMBH, LEUNA/DE
 ADDINOL LUBE OIL GMBH, LEUNA/DE
 AVIA AG, MÜNCHEN/DE
 AVIA AG, MÜNCHEN/DE
 AVIA AG, MÜNCHEN/DE
 AVISTA OIL DEUTSCHLAND GMBH, UETZE/DE
 AVISTA OIL DEUTSCHLAND GMBH, UETZE/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
 BLASER SWISSLUBE AG, HASLE-RÜEGSAU/CH
 BLASER SWISSLUBE AG, HASLE-RÜEGSAU/CH
 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
 CONDAT LUBRIFIANTS, CHASSE SUR RHONE/FR
 DE OLIEBRON BV, ZWIJNDRECHT/NL
 DEUTSCHE ÖLWERKE LUBMIN, LUBMIN/DE
 ELLIS ENTERPRISES EAST D.O.O. KRUSEVAC, KRUŠEVAC/RS
 ELLIS ENTERPRISES EAST D.O.O. KRUSEVAC, KRUŠEVAC/RS
 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
 EXXONMOBIL CORPORATION, HOUSTON, TX/US
 EXXONMOBIL CORPORATION, HOUSTON, TX/US
 FINKE MINERALÖLWERK GMBH, 27374 VISSELHÖVEDE/DE
 FINKE MINERALÖLWERK GMBH, 27374 VISSELHÖVEDE/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
 FUCHS PETROLUB SE, MANNHEIM/DE
 GULF OIL INTERNATIONAL, MUMBAI/IN
 GULF OIL INTERNATIONAL, MUMBAI/IN
 GULF OIL INTERNATIONAL, MUMBAI/IN
 HUILES BERLIET S.A., SAINT-PIERST/FR
 HUILES BERLIET S.A., SAINT-PIERST/FR
 IGOL FRANCE, AMIENS/FR
 INA MAZIVA LTD., ZAGREB/HR
 INA MAZIVA LTD., ZAGREB/HR
 KUWAIT PETROLEUM (BELGIUM) N.V., ANTWERP/BE
 KUWAIT PETROLEUM (BELGIUM) N.V., ANTWERP/BE
 LAEMMLE CHEMICALS AG, MADETSWIL/CH
 LAEMMLE CHEMICALS AG, MADETSWIL/CH
 LIEBHERR HYDRAULIKBAGGER GMBH, KIRCHDORF/DE
 LIQUI MOLY GMBH, ULM/DE
 LIQUI MOLY GMBH, ULM/DE
 LUKOIL LUBRICANTS EUROPE GMBH, VIENNA/AT
 LUKOIL LUBRICANTS EUROPE GMBH, VIENNA/AT
 LUKOIL LUBRICANTS EUROPE GMBH, VIENNA/AT
 LUKOIL LUBRICANTS EUROPE GMBH, VIENNA/AT
 MEGUIN GMBH & CO. KG, SAARLOUIS/DE
 MEGUIN GMBH & CO. KG, SAARLOUIS/DE
 MOEVE COMMERCIAL S.A.U., MADRID/ES
 MOEVE COMMERCIAL S.A.U., MADRID/ES
 MOL-LUB KFT, ALMASFUZITO/HU
 MOTOREX AG, LANGENTHAL/CH
 MOTOREX AG, LANGENTHAL/CH
 MOTOREX AG, LANGENTHAL/CH
 MOTOREX AG, LANGENTHAL/CH
 MOTOREX AG, LANGENTHAL/CH
 MOTUL SA, AUBERVILLIERS/FR
 OEL-BRACK AG, HUNZENSCHWIL/CH
 OEST LUBRICANTS GMBH & CO.KG, FREUDENSTADT/DE
 OEST LUBRICANTS GMBH & CO.KG, FREUDENSTADT/DE
 OPET FUCHS MADENI YAG SAN. VE TIC. A.S., IZMIR/TR
 ORLEN OIL SP. Z O.O., KRAKOW/PL
 ORLEN S.A., GDANSK/PL
 PAKELO MOTOR OIL S.P.A. A S.U., SAN BONIFACIO (VR)/IT
 PETROGAL S.A., LISBOA/PT
 PETROGAL S.A., LISBOA/PT
 PETROL OFISI A.S., ISTANBUL/TR
 PETROL OFISI A.S., ISTANBUL/TR

Trade name (12L)

ADDINOL GETRIEBEÖL GX 80W-90 ML
 ADDINOL GETRIEBEÖL GH 75 W 90 SL
 AVIA POWERTRAIN SUPREME GAX 75W-90
 AVIA POWERTRAIN GAX 80W-90
 AVIA POWERTRAIN PREMIUM AX 80W-90
 AVISTA PEER EVO GL4/GL5 SAE 80W-90
 AVISTA PEER EVO PRIME GL4/GL5 SAE 80W-90
 TECTROL MULTIGEAR PLUS 8090
 BELGIN LUBEX MITRAS AX SYN ULTRA 75W-90
 BELGIN LUBEX MITRAS AX EP MD 80W-90
 EVOLCA SGP 75W90
 EVOLCA BGP 80W90
 CASTROL TRANSMAX UNIVERSAL LL 80W-90
 CASTROL TRANSMAX UNIVERSAL LL 75W-90
 CASTROL TRANSMAX AXLE LONG DRAIN 80W-90
 CHAMPION OEM SPECIFIC 75W90 GL 5
 DELO GEAR TDL 80W-90
 DELO SYN-TDL 75W-90
 GEAR TXS 75W90
 TOR UNI GEAR LD 75W90
 AVENO TDL ULTIMATE 75W-90
 MULTIHIPO 75W-90 SINT
 MULTIHIPO 80W-90 F PLUS
 ENI ROTRA LSX 75W-90
 ENI ROTRA MP 75W-90
 MOBILUBE 1 SHC 75W-90
 MOBILUBE HD-A PLUS 80W-90
 MOBILUBE S 80W-90
 MOBIL DELVAC 1 GEAR OIL 75W-90
 MOBIL DELVAC ULTRA TOTAL DRIVELINE 75W-90
 MOBIL DELVAC MODERN AXLE OIL 80W-90
 MOBILUBE S 80W-90
 AVIATICON FINKOGEAR PREMIUM 75W-90
 AVIATICON FINKOGEAR SUPER 80W-90
 FUCHS TITAN CYTRAC HSY SAE 75W-90
 FUCHS TITAN GEAR HYP LD SAE 80W-90
 FUCHS TITAN SUPERGEAR MC SAE 80W-90
 FUCHS TITAN CYTRAC RR SAE 75W-90
 GEARWAY S5 75W-90
 GEARWAY G5 80W-90
 FUCHS TITAN CYTRAC TD SAE 75W-90
 PENTOSIN GEAR PRO SAE 75W-90
 PENTOSIN GEAR ULTRA SAE 75W-90
 GULF GEAR TDL 80W-90
 GULF SYNGEAR 75W-90
 GULF GEAR LD 80W-90
 LONGEVIA TC ECO 80W-90
 LONGEVIA TCX ECO 75W-90
 SYNTHEGEAR 75W-90
 INA HIPENOL TDL 80W-90
 INA HIPENOL SHD 75W-90
 Q8 TRANS XGS 75W-90
 Q8 GEAR OIL XG SAE 80W-90
 ROXOR SUPER DUTY SYNTH 75W-90
 ROXOR TOPGEAR 80W-90
 LIEBHERR SYNTOGear PLUS 75W-90
 LIQUI MOLY HYPOID GETRIEBEÖL TDL SAE 80W-90
 LIQUI MOLY VOLLSYN. HYPOID GETR.ÖL TRUCK (75W-90)
 LUKOIL TRANSMISSION LD 80W-90
 LUKOIL TRANSMISSION SYNTH BSX 75W-90
 LUKOIL TRANSMISSION MN 75W-90
 LUKOIL TRANSMISSION UNI 80W-90
 MEGOL HYPOID-GETRIEBEOEL TDL 80W-90
 MEGOL GETRIEBEOEL TRUCK-SYNTH SAE 75W-90
 CEPESA TRANSMISIONES EP FE+LD 75W-90
 MAN SUPER AXLE 3343 75W-90
 MOL HYKOMOL TDL 75W90
 YORK 896 75W90
 MOTOREX YORK PENTA TL SAE 75W/90
 MOTOREX YORK GEAR ZX TP SAE 80W/90
 MOTOREX YORK UNIVERSAL CT SAE 80W/90
 MOTOREX YORK UNISYNT ZX SAE 75W90
 MOTUL GEAR SYNTH TDL 75W-90
 MIDLAND SENSOGear 75W-90
 OEST SYNTH GETRIEBEÖL SAE 75W-90
 OEST GETRIEBEÖL FE SAE 80W-90 GL4/5
 OTOKAR SPECTRA DO Z 80W-90
 ORLEN OIL GEAR LL 80W-90
 TITANIS SUPER GL-5 80W-90
 GLOBAL MULTIGEAR TS SAE 75W/90
 GALP TRANSVEX TDL 75W90
 GALP TRANSOIL HP XT 80W90
 MAXIGEAR TECH EP-X 80W-90
 MAXIGEAR D 75W-90

ZF approval number

ZF000672
 ZF002280
 ZF012039
 ZF012197
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 ZF000491
 ZF000565
 ZF004755
 ZF011188
 ZF001098
 ZF001224
 ZF000980
 ZF001981
 ZF001665
 ZF001591

Manufacturer (12L)

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
 RAVENSBERGER SCHMIERSTOFFVERTRIEB GMBH, WERTHER/DE
 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
 ROLF LUBRICANTS GMBH, LEVERKUSEN/DE
 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
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE
 TEDEX S.A., LUBOCHNIA/PL
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
 VALVOLINE EUROPE, DORDRECHT/NL
 VALVOLINE EUROPE, DORDRECHT/NL
 WILHELM HOYER B.V. & CO. KG, VISSSELHÖVEDE/DE
 WILHELM HOYER B.V. & CO. KG, VISSSELHÖVEDE/DE
 WOLF OIL CORPORATION N.V., HEMIKSEM/BE
 YACCO SAS, ST PIERRE LES ELBEUF/FR
 ZELLER+GMELIN GMBH&CO.KG, EISLINGEN/DE
 ZF FRIEDRICHSHAFEN AG, FRIEDRICHSHAFEN/DE

Trade name (12L)

TUTELA TRANSMISSION FE-AXLE (SAE 75W-90)
 TUTELA TRANSMISSION STARGEAR AX-ED (SAE 75W-90)
 PETRONAS TUTELA AXLE 700 EHD 75W-90
 UNIGEAR GOLD 75W90
 UNIGEAR GOLD 75W90
 RAVENOL GEAR SUPER SYNTH GSS SAE 75W-90
 RAVENOL GEAR TRANS SYNTH GTS SAE 75W-90
 REPSOL CARTAGO FE LD 75W90
 REPSOL CARTAGO LD 80W90
 REPSOL NAVIGATOR FE LL 75W-90
 REPSOL NAVIGATOR LL 80W-90
 ROLF TRANSMISSION S9 AGE 75W-90
 SHELL SPIRAX S3 AD 80W-90
 SHELL SPIRAX S3 AM 80W-90
 SHELL SPIRAX S6 AXME 75W-90
 SHELL SPIRAX S6 ADME 75W- 90
 SINOPEC GREATWALL VT 75W/90
 SINOPEC MULTIPURPOSE-II GEAR OIL 80W-90
 SRS GETRIEBEFLUID SML 80W-90
 SRS GETRIEBEFLUID SXL 75W-90
 SRS WIOLIN HGAV 80W-90
 TEDEX SUPER GEAR OIL (TDL) SAE 80W-90
 TRAXIUM DUAL 8 FE 80W-90
 TRAXIUM DUAL 9 FE 75W-90
 TRAXIUM AXLE 9 80W-90
 TRAXIUM AXLE 9 80W-90
 TRANSELF SYN FE 75W-90
 VALVOLINE HEAVY DUTY TDL PRO 75W-90
 VALVOLINE HEAVY DUTY AXLE OIL PRO 80W-90 LD
 HOYER GEAR F-FP 75W-90
 HOYER GEAR M-FS 80W-90
 WOLF OFFICIALTECH 75W90 GL 5
 BVX 1000 75W-90
 DIVINOL MULTI-AXLE 80W90
 ZF ECOFLUID X SAE 80W-90

ZF approval number

ZF001199
 ZF001738
 ZF003639
 ZF001203
 ZF003606
 ZF006037
 ZF006038
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 ZF001292
 ZF001262
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 ZF000527
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 ZF000447
 ZF001655
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 ZF001342
 ZF004817
 ZF006074
 ZF008229
 ZF008230
 ZF008393
 ZF001283
 ZF001837
 ZF011993
 ZF011992
 ZF003525
 ZF009462
 ZF001684
 ZF001266

Lubricant class 12M

Transmission oil

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

Manufacturer (12M)

ADDINOL LUBE OIL GMBH, LEUNA/DE
 AVIA AG, MÜNCHEN/DE
 AVIA AG, MÜNCHEN/DE
 AVISTA OIL DEUTSCHLAND GMBH, UETZE/DE
 AVISTA OIL DEUTSCHLAND GMBH, UETZE/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
 BLASER SWISSLUBE AG, HASLE-RÜEGSAU/CH
 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
 ELLIS ENTERPRISES EAST D.O.O. KRUSEVAC, KRUSHEVAC/RS
 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
 FINKE MINERALÖLWERK GMBH, 27374 VISSSELHÖVEDE/DE
 FUCHS PETROLUB SE, MANNHEIM/DE
 FUCHS PETROLUB SE, MANNHEIM/DE
 FUCHS PETROLUB SE, MANNHEIM/DE
 FUCHS PETROLUB SE, MANNHEIM/DE
 GULF OIL INTERNATIONAL, MUMBAI/IN
 GULF OIL INTERNATIONAL, MUMBAI/IN
 HUILES BERLIET S.A., SAINT-PRIEST/FR
 INA MAZIVA LTD., ZAGREB/HR
 KUWAIT PETROLEUM (BELGIUM) N.V., ANTWERP/BE
 LAEMMLE CHEMICALS AG, MADETZWIL/CH
 LIQUI MOLY GMBH, ULM/DE
 LUKOIL LUBRICANTS EUROPE GMBH, VIENNA/AT
 LUKOIL LUBRICANTS EUROPE GMBH, VIENNA/AT
 MEGUIN GMBH & CO. KG, SAARLOUIS/DE
 MOTOREX AG, LANGENTHAL/CH
 MOTOREX AG, LANGENTHAL/CH
 OEST LUBRICANTS GMBH & CO.KG, FREUDENSTADT/DE
 OPET FUCHS MADENI YAG SAN. VE TIC. A.S., IZMIR/TR
 ORLEN OIL SP. Z O.O., KRAKOW/PL
 ORLEN S.A., GDANSK/PL
 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
 PETROL OFISI A.S., ISTANBUL/TR
 REPSOL LUBRICANTES Y ESPECIALIDADES, S.A, MADRID/ES
 REPSOL LUBRICANTES Y ESPECIALIDADES, S.A, MADRID/ES
 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
 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
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE
 TEDEX S.A., LUBOCHNIA/PL
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
 VALVOLINE EUROPE, DORDRECHT/NL
 VALVOLINE GLOBAL PRODUCTS, LEXINGTON/US
 WILHELM HOYER B.V. & CO. KG, VISSSELHÖVEDE/DE
 ZELLER+GMELIN GMBH&CO.KG, EISLINGEN/DE
 ZF FRIEDRICHSHAFEN AG, FRIEDRICHSHAFEN/DE

Trade name (12M)

ADDINOL GETRIEBEÖL GX 80W-90 ML
 AVIA POWERTRAIN GAX 80W-90
 AVIA POWERTRAIN PREMIUM AX 80W-90
 AVISTA PEER EVO GL4/GL5 SAE 80W-90
 AVISTA PEER EVO PRIME GL4/GL5 SAE 80W-90
 TECTROL MULTIGEAR PLUS 8090
 BELGIN LUBEX MITRAS AX EP MD 80W-90
 BELGIN LUBEX MITRAS AX EP EXTRA 80W-90
 EVOLCA BGP 80W90
 CASTROL TRANSMAX UNIVERSAL LL 80W-90
 CASTROL TRANSMAX AXLE LONG DRAIN 80W-90
 MULTIGEAR EP-5 SAE 80W-90
 DELO GEAR TDL 80W-90
 DELO GEAR EP-5 SAE 80W-90
 MULTIHIPO 80W-90 F PLUS
 MOBILUBE HD-A PLUS 80W-90
 MOBILUBE S 80W-90
 MOBIL DELVAC MODERN AXLE OIL 80W-90 V1
 MOBIL DELVAC MODERN AXLE OIL 80W-90 V1
 MOBIL DELVAC MODERN AXLE OIL 80W-90
 MOBILUBE S 80W-90
 AVIATICON FINKOGEAR SUPER 80W-90
 FUCHS TITAN GEAR HYP LD SAE 80W-90
 FUCHS TITAN SUPERGEAR MC SAE 80W-90
 GEARWAY G5 80W-90
 PENTOSIN GETRIEBEÖL O-226 80W-90
 GULF GEAR TDL 80W-90
 GULF GEAR LD 80W-90
 LONGEVIA TC ECO 80W-90
 INA HIPENOL TDL 80W-90
 Q8 GEAR OIL XG SAE 80W-90
 ROXOR TOPGEAR 80W-90
 LIQUI MOLY HYPOID GETRIEBEÖL TDL SAE 80W-90
 LUKOIL TRANSMISSION LD 80W-90
 LUKOIL TRANSMISSION UNI 80W-90
 MEGOL HYPOID-GETRIEBEOEL TDL 80W-90
 MOTOREX_YORK UNIVERSAL CT SAE 80W/90
 MOTOREX YORK GEAR ZX TP SAE 80W/90
 OEST GETRIEBEÖL FE SAE 80W-90 GL4/5
 OTOKAR SPECTRA DO Z 80W-90
 ORLEN OIL GEAR LL 80W-90
 TITANIS SUPER GL-5 80W-90
 TRAXON 80W-90
 TRAXON 80W-90
 GALP TRANSOIL HP XT 80W90
 MAXIGEAR TECH EP-X 80W-90
 REPSOL CARTAGO LD 80W90
 REPSOL NAVIGATOR LL 80W-90
 SHELL SPIRAX S3 AD 80W-90
 SHELL SPIRAX S3 AM 80W-90
 SHELL SPIRAX HD 80W- 90
 SHELL SPIRAX HD 80W- 90
 SHELL SPIRAX HD 80W- 90
 SHELL SPIRAX S4 AX (80W-90)
 SHELL SPIRAX S4 AX (80W-90)
 SHELL SPIRAX S4 AX (80W-90)
 SHELL SPIRAX S4 AX (80W-90)
 SINOPEC MULTIPURPOSE-II GEAR OIL 80W-90
 SRS GETRIEBEFLUID SML 80W-90
 SRS WIOLIN HGAV 80W-90
 TEDEX SUPER GEAR OIL (TDL) SAE 80W-90
 TRAXIUM DUAL 8 FE 80W-90
 TRAXIUM AXLE 9 80W-90
 TRAXIUM AXLE 9 80W-90
 VALVOLINE HEAVY DUTY AXLE OIL PRO 80W-90 LD
 KUBOTA 80W-90 GEAR LUBRICANT HD
 HOYER GEAR M-FS 80W-90
 DIVINOL MULTI-AXLE 80W90
 ZF ECOFLUID X SAE 80W-90

ZF approval number

ZF000672
 ZF012197
 ZF012198
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 ZF008229
 ZF008230
 ZF001837
 ZF008218
 ZF011992
 ZF001684
 ZF001266

Lubricant class 12N

Transmission oil

Viscosity grades: SAE 75W-90

Manufacturer (12N)

ADDINOL LUBE OIL GMBH, LEUNA/DE
 AVIA AG, MÜNCHEN/DE
 BASF SE, LUDWIGSHAFEN/DE
 BELGIN MADENI YAGLAR TIC. VE SAN. A.S., KOCAELI/TR
 BLASER SWISSLUBE AG, HASLE-RÜEGSAU/CH
 CASTROL LTD, LONDON/GB
 CHAMPION CHEMICALS N.V., HEMIKSEM/BE
 CHEVRON LUBRICANTS, SAN RAMON, CA/US
 CONDAT LUBRIFIANTS, CHASSE SUR RHONE/FR
 DE OLIEBRON BV, ZWIJNDRECHT/NL
 DEUTSCHE ÖLWERKE LUBMIN, LUBMIN/DE
 ELLIS ENTERPRISES EAST D.O.O. KRUSEVAC, KRUŠEVAC/RS
 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
 FINKE MINERALÖLWERK GMBH, 27374 VISSSELHÖVEDE/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
 GULF OIL INTERNATIONAL, MUMBAI/IN
 HUILES BERLIET S.A., SAINT-PRIEST/FR
 IGOL FRANCE, AMIENS/FR
 INA MAZIVA LTD., ZAGREB/HR
 KUWAIT PETROLEUM (BELGIUM) N.V., ANTWERP/BE
 LAEMMLE CHEMICALS AG, MADETSWIL/CH
 LIEBHERR HYDRAULIKBAGGER GMBH, KIRCHDORF/DE
 LIQUI MOLY GMBH, ULM/DE
 LUKOIL LUBRICANTS EUROPE GMBH, VIENNA/AT
 LUKOIL LUBRICANTS EUROPE GMBH, VIENNA/AT
 MEGUIN GMBH & CO. KG, SAARLOUIS/DE
 MOEVE COMMERCIAL S.A.U., MADRID/ES
 MOEVE COMMERCIAL S.A.U., MADRID/ES
 MOL-LUB KFT, ALMASFUZITO/HU
 MOTOREX AG, LANGENTHAL/CH
 MOTOREX AG, LANGENTHAL/CH
 MOTOREX AG, LANGENTHAL/CH
 MOTUL SA, AUBERVILLIERS/FR
 OEL-BRACK AG, HUNZENSWIL/CH
 OEST LUBRICANTS GMBH & CO.KG, FREUDENSTADT/DE
 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
 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
 PHI OIL GMBH, ST. GEORGEN/AT
 PHI OIL GMBH, ST. GEORGEN/AT
 RAVENSBERGER SCHMIERSTOFFVERTRIEB GMBH, WERTHER/DE
 RAVENSBERGER SCHMIERSTOFFVERTRIEB GMBH, WERTHER/DE
 REPSOL LUBRICANTES Y ESPECIALIDADES, S.A, MADRID/ES
 REPSOL LUBRICANTES Y ESPECIALIDADES, S.A, MADRID/ES
 ROLF LUBRICANTS GMBH, LEVERKUSEN/DE
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB
 SINOPEC LUBRICANT CO., LTD., BEIJING/CN
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
 VALVOLINE EUROPE, DORDRECHT/NL
 WILHELM HOYER B.V. & CO. KG, VISSSELHÖVEDE/DE
 WOLF OIL CORPORATION N.V., HEMIKSEM/BE
 YACCO SAS, ST PIERRE LES ELBEUF/FR

Trade name (12N)

ADDINOL GETRIEBEÖL GH 75 W 90 SL
 AVIA POWERTRAIN SUPREME GAX 75W-90
 EMGARD HP 75W-90
 BELGIN LUBEX MITRAS AX SYN ULTRA 75W-90
 EVOLCA SGP 75W90
 CASTROL TRANSMAX UNIVERSAL LL 75W-90
 CHAMPION OEM SPECIFIC 75W90 GL 5
 DELO SYN-TDL 75W-90
 GEAR TXS 75W90
 TOR UNI GEAR LD 75W90
 AVENO TDL ULTIMATE 75W-90
 MULTIHIPO 75W-90 SINT
 ENI ROTRA LSX 75W-90
 ENI ROTRA MP 75W-90
 MOBILUBE 1 SHC 75W-90
 MOBIL DELVAC 1 GEAR OIL 75W-90
 MOBIL DELVAC ULTRA TOTAL DRIVELINE 75W-90
 AVIATICON FINKOGEAR PREMIUM 75W-90
 FUCHS TITAN CYTRAC HSY SAE 75W-90
 GEARWAY S5 75W-90
 FUCHS TITAN CYTRAC TD SAE 75W-90
 PENTOSIN GEAR PRO SAE 75W-90
 PENTOSIN GEAR ULTRA SAE 75W-90
 FUCHS TITAN CYTRAC RR SAE 75W-90
 GULF SYNGEAR 75W-90
 LONGEVIA TCX ECO 75W-90
 SYNTHEGEAR 75W-90
 INA HIPENOL SHD 75W-90
 Q8 TRANS XGS 75W-90
 ROXOR SUPER DUTY SYNTH 75W-90
 LIEBHERR SYNTOGear PLUS 75W-90
 LIQUI MOLY VOLL SYN. HYPOID GETR.ÖL TRUCK (75W-90)
 LUKOIL TRANSMISSION SYNTH BSX 75W-90
 LUKOIL TRANSMISSION MN 75W-90
 MEGOL GETRIEBEOEL TRUCK-SYNTH SAE 75W-90
 CEPESA TRANSMISIONES EP FE+LD 75W-90
 MAN SUPER AXLE 3343 75W-90
 MOL HYKOMOL TDL 75W90
 YORK 896 75W90
 MOTOREX YORK UNISYNT ZX SAE 75W90
 MOTOREX YORK PENTA TL SAE 75W/90
 MOTUL GEAR SYNTH TDL 75W-90
 MIDLAND SENSOGear 75W-90
 OEST SYNTH GETRIEBEÖL SAE 75W-90
 GLOBAL MULTIGEAR TS SAE 75W/90
 TRAXON SYNTHETIC 75W-90
 TRAXON SYNTHETIC 75W-90
 GALP TRANSVEX TDL 75W90
 MAXIGEAR D 75W-90
 TUTELA TRANSMISSION FE-AXLE (SAE 75W-90)
 TUTELA TRANSMISSION STARGEAR AX-ED (SAE 75W-90)
 PETRONAS TUTELA AXLE 700 EHD 75W-90
 UNIGEAR GOLD 75W90
 UNIGEAR GOLD 75W90
 RAVENOL GEAR SUPER SYNTH GSS SAE 75W-90
 RAVENOL GEAR TRANS SYNTH GTS SAE 75W-90
 REPSOL CARTAGO FE LD 75W90
 REPSOL NAVIGATOR FE LL 75W-90
 ROLF TRANSMISSION S9 AGE 75W-90
 SHELL SPIRAX S6 ADME 75W- 90
 SHELL SPIRAX S6 AXME 75W-90
 SINOPEC GREATWALL VT 75W/90
 SRS GETRIEBEFLUID SXL 75W-90
 TRAXIUM DUAL 9 FE 75W-90
 TRANSELF SYN FE 75W-90
 VALVOLINE HEAVY DUTY TDL PRO 75W-90
 HOYER GEAR F-FP 75W-90
 WOLF OFFICIALTECH 75W90 GL 5
 BVX 1000 75W-90

ZF approval number

ZF002260
 ZF012039
 ZF001716
 ZF005978
 ZF004734
 ZF002144
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 ZF003364
 ZF000041
 ZF001681
 ZF003699
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 ZF000527
 ZF001655
 ZF006074
 ZF008393
 ZF001283
 ZF011993
 ZF003525
 ZF009462

Lubricant class 12P

Lubricating grease according to specification / requirement:

- DIN 51502 classification at least GP 0/00/000 G -30
- ISO 6743-9 classification at least ISO-L-X C C E/F/H/I B 0/00/000
- Consistency class: NLGI 0 / 00 / 000
- Base oil: API Group 1 / 2 / 3 / 4
- Thickener type: Li / Ca
- EP additives
- Release of centralized lubricating system manufacturer for the used system must be available

Note:

- All trade products can be used which comply with the specifications / requirements mentioned above.
- The system or vehicle operator ensures that a regular and reliable supply of the greasing points is guaranteed.
- The system or vehicle operator ensures that greasing supply is never insufficient at any lubricating point (automatic error message via system and regular visual inspection).
- The system manufacturer's provisions with regard to checking for escaping fresh grease and the change intervals must be observed.

Lubricant class 12S

Transmission oil

Viscosity grades: SAE 75W-110, 75W-140, 80W-110, 80W-140, 85W-110, 85W-140

Manufacturer (12S)

ADDINOL LUBE OIL GMBH, LEUNA/DE
 BAPCO REFINING, AWALI/BH
 CASTROL LTD, LONDON/GB
 CHEVRON LUBRICANTS, SAN RAMON, CA/US
 CHEVRON LUBRICANTS, SAN RAMON, CA/US
 CHEVRON LUBRICANTS, SAN RAMON, CA/US
 ELLIS ENTERPRISES EAST D.O.O. KRUSEVAC, KRUSHEVAC/RS
 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
 FUCHS PETROLUB SE, MANNHEIM/DE
 FUCHS PETROLUB SE, MANNHEIM/DE
 FUCHS PETROLUB SE, MANNHEIM/DE
 FUCHS PETROLUB SE, MANNHEIM/DE
 INGRAX INDUSTRIA E COMERCIO DE GRAXA S/A, DUQUE DE CAXIAS/BR
 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
 MOEVE COMMERCIAL S.A.U., MADRID/ES
 MOTOREX AG, LANGENTHAL/CH
 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
 PETRO-CANADA LUBRICANTS INC., MISSISSAUGA, ONTARIO/CA
 PETROGAL S.A., LISBOA/PT
 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
 RAVENSBERGER SCHMIERSTOFFVERTRIEB GMBH, WERTHER/DE
 REPSOL LUBRICANTES Y ESPECIALIDADES, S.A, MADRID/ES
 REPSOL LUBRICANTES Y ESPECIALIDADES, S.A, MADRID/ES
 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
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 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE
 SWD LUBRICANTS GMBH & CO.KG, DUISBURG/DE
 TEXSA DO BRASIL LTDA, UMUARAMA/PR/BR
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR
 VALVOLINE EUROPE, DORDRECHT/NL

Trade name (12S)

ADDINOL GETRIEBEÖL GH 85 W 140
 SPAREX EP 85W-140 GL-5
 CASTROL AXLE EPX 85W-140
 DELO SYN-GEAR XS 75W-140
 DELO GEAR EP-5 SAE 85W-140
 MULTIGEAR PREMIUM EP SAE 85W-140
 MULTIHIPO 80W-140 F PLUS
 ENI ROTRA MP 85W-140
 MOBIL DELVAC 1 GEAR OIL 80W-140
 MOBIL DELVAC MODERN AXLE OIL 85W-140 V1
 MOBIL DELVAC MODERN AXLE OIL 85W-140 V1
 MOBIL DELVAC MODERN AXLE OIL 85W-140 V1
 TITAN SUPERGEAR MC SAE 80W-140
 FUCHS TITAN SUPERGEAR SAE 85W-110
 FUCHS TITAN SUPERGEAR SAE 85W-140
 PENTOSIN GEAR SAE 85W-140
 MULTIGEROL 85W140
 Q8 TRANS XGR 75W-140
 Q8 AXLE OIL XG SAE 80W-140
 Q8 SYNTHETIC GEAR OIL SAE 80W-140
 ROXOR SUPER DUTY SYNTH 75W-140
 CEPESA TRANSMISIONES EP 85W-140
 MOTOREX YORK GEAR ZX TP SAE 80W/140
 GLOBAL GEAR SA SAE 85W-140
 TRAXON 85W-140
 TRAXON 85W-140
 TRAXON XL SYNTHETIC BLEND 80W-140
 TRAXON XL SYNTHETIC BLEND 80W-140
 GALP TRANSVEX TDL 85W140
 PETRONAS TUTELA AXLE 700 EHD 75W-140
 TUTELA TRANSMISSION X-ROAD (75W-140)
 AKCELA GEAR 135H EP (SAE 85W-140)
 AKCELA GEAR 135H EP (SAE 85W-140)
 AMBRA HYPOIDE 140 (SAE 85W-140)
 AMBRA HYPOIDE 140 (SAE 85W-140)
 ARBOR TRW 140 (SAE 85W-140)
 ARBOR TRW 140 (SAE 85W-140)
 PETRONAS TUTELA AXLE 300 85W-140
 PETRONAS TUTELA AXLE 300 85W-140
 RAVENOL TDG SAE 75W-110
 REPSOL CARTAGO LD 85W140
 REPSOL NAVIGATOR LL 85W-140
 SHELL SPIRAX S6 AXME 75W-140
 SHELL SPIRAX S 75W-140
 SHELL SPIRAX S3 AX 85W-140
 SHELL SPIRAX S3 AX 85W-140
 SHELL SPIRAX S3 AX 85W-140
 SHELL SPIRAX S3 AX 85W-140
 SHELL SPIRAX S3 AX 85W-140
 SHELL SPIRAX S3 AX 85W-140
 SHELL SPIRAX S3 AX 85W-140
 SHELL SPIRAX S3 AS 80W-140
 SRS WIOLIN HL 5 85W-140
 SWD RHEINOL SYNKROL 5 - SAE 85W140
 TEXSA GEAR MULTI GL-5 85W140
 TRAXIUM AXLE 8 FE 80W-140
 DYNATRANS HD 85W-140
 TRANSELF TYPE B 85W-140
 TRAXIUM AXLE 7 85W-140
 VALVOLINE HEAVY DUTY AXLE OIL PRO 75W-140

ZF approval number

ZF003561
 ZF002318
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