



Automatic transmissions for commercial vehicles

List of lubricants TE-ML 14

Product groups	Approved lubricants for service fills	Recommended alternatives
Ecomat HP500, HP590, HP600 HP502C, HP552C, HP592C, HP602C	Lubricant class 14A / 14B / 14C Automatic Transmission Fluids (ATF) See overleaf for approved trade products and oil change intervals Particularly recommended: ZF Ecofluid A ⁽¹⁾	Monograde engine oils SAE 10W ⁽²⁾

- (1) The fully synthetic ATF ZF Ecofluid A has been especially developed for use in the Ecomat transmission. Its high levels of thermal stability, the good sheer strength and high fretting resistance ensure a particularly high level of quality protection and thereby provide longer service lives for bearings and gears. Another prominent feature of ZF Ecofluid A is its improved levels of shiftability under extreme climatic conditions and it is therefore also suitable for use in regions with cold or hot climates.
- (2) SAE 10W monograde engine oils which satisfy one of the following specifications may be used under exceptional circumstances: API CD/CE/CF-4/CF/CG-4/SF/SG/SH/SJ or ACEA category A, B or E. The shift elements and friction linings are coordinated to ATF. There is a risk that levels of shift comfort will suffer as a result of using engine oil.

The list of lubricants TE-ML 14, Edition 12/2001 replaces all previous editions. The current list can always be obtained from all After-Sales Service points and on the Internet under www.zf.com / information / technical information .	ZF Friedrichshafen AG D-88038 Friedrichshafen phone:+ 49 7541 77 7461 fax: + 49 7541 77 7319
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Lubricant class 14A

Mineral oil-based ATFs in accordance with Group standard ZFN 13015

Manufacturer (14A)

ADDINOL LUBE OIL GMBH, LEUNA/D
 ADDINOL LUBE OIL GMBH, LEUNA/D
 ARAL LUBRICANTS GMBH & CO. KG, BOCHUM/D
 ARAL LUBRICANTS GMBH & CO. KG, BOCHUM/D
 BAYWA AG, MÜNCHEN/D
 BLASER SWISSLUBE AG, HASLE-RÜEGSAU/CH
 BP INTERNATIONAL, PANGBOURNE, READING/GB
 BUCHER AG LANGENTHAL, LANGENTHAL/CH
 CALTEX (UK) LIMITED, LONDON/GB
 CASTROL INTERNATIONAL, PANGBOURNE READING/GB
 CASTROL INTERNATIONAL, PANGBOURNE READING/GB
 CASTROL INTERNATIONAL, PANGBOURNE READING/GB
 CASTROL INTERNATIONAL, PANGBOURNE READING/GB
 DEA MINERALOEL AG, HAMBURG/D
 DEA MINERALOEL AG, HAMBURG/D
 DEA MINERALOEL AG, HAMBURG/D
 EXXON MOBIL CORPORATION, FAIRFAX, VIRGINIA/USA
 EXXON MOBIL CORPORATION, FAIRFAX, VIRGINIA/USA
 FL ITALIA S.P.A., VILLASTELLONE/I
 FL ITALIA S.P.A., VILLASTELLONE/I
 FUCHS PETROLUB AG, MANNHEIM/D
 FUCHS PETROLUB AG, MANNHEIM/D
 GENOL GMBH & CO., WIEN/A
 GINOUVES GEORGES SA, LA FARLEDE/F
 GINOUVES GEORGES SA, LA FARLEDE/F
 HUILES BERLIET S.A., SAINT PRIEST/F
 HYDROTEX, CARROLLTON, TEXAS/USA
 IGOL FRANCE SA, AMIENS/F
 IGOL FRANCE SA, AMIENS/F
 KRAFFT S.A., ANDOAIN/E
 KRAFFT S.A., ANDOAIN/E
 KUWAIT PETROLEUM R&T B.V., EUROPOORT RT/NL
 KUWAIT PETROLEUM R&T B.V., EUROPOORT RT/NL
 MORRIS LUBRICANTS, SHREWSBURY/GB
 MORRIS LUBRICANTS, SHREWSBURY/GB
 OMV AG, SCHWECHAT/A
 OMV AG, SCHWECHAT/A
 PAKELO MOTOR OIL S.R.L., SAN BONIFACIO (VR)/I
 PANOLIN AG, MADETSWIL/CH
 PETROGAL S.A., LISBOA/P
 PRZEDSIĘBIORSTWO MODEX-OIL, KWIDZYN/PL
 RAFINERIA NAFTY JEDLICZE SA, JEDLICZE/PL
 RAFINERIA NAFTY JEDLICZE SA, JEDLICZE/PL
 RHG NORD, HANNOVER/D
 S.A.E.L., MADRID/E
 SHELL ASEOL AG, BERN 5/CH
 SHELL INTERNATIONAL PETROLEUM COMP LTD, LONDON/GB
 SHELL INTERNATIONAL PETROLEUM COMP LTD, LONDON/GB
 SLOVNAFT VURUP A.S., BRATISLAVA/SK
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/D
 SUN OIL COMPANY (BELGIUM) N.V., AARTSELAAR/B
 SUN OIL COMPANY (BELGIUM) N.V., AARTSELAAR/B
 TEXACO BELGIUM N.V., GHENT/B
 TEXACO BELGIUM N.V., GHENT/B
 TOTALFINAELF LUBRIFIANTS S.A.; PARIS/F
 TOTALFINAELF LUBRIFIANTS S.A.; PARIS/F
 TOTALFINAELF LUBRIFIANTS S.A.; PARIS/F
 TOTALFINAELF LUBRIFIANTS S.A.; PARIS/F
 UNIL S.A., SAUMUR CEDEX/F
 VALVOLINE EUROPE, DORDRECHT/NL
 VALVOLINE EUROPE, DORDRECHT/NL
 VEEDOL INTERNATIONAL, PANGBOURNE READING/GB
 VEEDOL INTERNATIONAL, PANGBOURNE READING/GB
 VEEDOL INTERNATIONAL, PANGBOURNE READING/GB

Trade name (14A)

ADDINOL ATF D II D
 ADDINOL ATF D III
 ARAL GETRIEBEÖL ATF 22
 ARAL GETRIEBEÖL ATF 55 F-30589
 BAYWA ATF 3000
 ATF GM
 BP AUTRAN MBX
 MOTOREX ATF SUPER
 CALTEX ATF-HDM
 CASTROL TQ DEXRON III (F-30520)
 CASTROL TQ-D (21289)
 CASTROL TQ-D (22765)
 CASTROL TRANSMAX T
 DEAFUID 3003
 DEAFUID 4011
 DEAMATIC
 ESSO ATF D (21611)
 MOBIL ATF 220
 TUTELA CAR GI/E
 TUTELA GI/A
 TITAN ATF 3000
 TITAN ATF 4000
 GENOL ATF MULTIFLUID
 YORK 686
 YORK 785
 HRD STARMATIC 3
 HY-TORQUE Z (ATF)
 ATF 420
 ATF 430
 ATF SYNTHETIC D3
 KRAFFT ATF 21247
 Q8 AUTO 14
 Q8 AUTO 15
 LIQUIMATIC D II
 LIQUIMATIC SUPER ATF
 OMV ATF D II (D22427)
 OMV ATF III
 PAKELO MULTIPURPOSE TRANSMISSION FLUID II D
 PANOLIN ATF DEXRON III
 GALP TRANSMATIC D II
 VECO MATIC IID
 HIPOL ATF II D
 HIPOL ATF III
 HG AUTOMATIK TF 3000
 GULF ATF D II D
 ASEOL ATF DB UNIVERSAL
 SHELL DONAX TA (D-21631)
 SHELL DONAX TA (D-21666)
 MADIT AUTOMATIC
 WINTERSHALL ATF D
 SUNAMATIC 149
 SUNAMATIC 153
 TEXAMATIC 4291
 TEXTRAN PSM
 ELFMATIC G3 SYN
 FINAMATIC II D
 TOTAL FLUIDE ATX
 TOTAL FLUIDEMATIC SYN
 MATIC D
 VALVOLINE ATF TYPE D
 VALVOLINE DURABLEND ATF
 VEEDOL ATF DEXRON III (F-30521)
 VEEDOL ATF-M (22764)
 VEEDOL UNITRANS S PLUS (F30359)

Lubricant class 14B

Semi-synthetic ATFs in accordance with Group standard ZFN 13015

Manufacturer (14B)

CHEVRONTEXACO GLOBAL LUBRICANTS, SAN RAMON/USA
 EXXON MOBIL CORPORATION, FAIRFAX, VIRGINIA/USA
 EXXON MOBIL CORPORATION, FAIRFAX, VIRGINIA/USA
 EXXON MOBIL CORPORATION, FAIRFAX, VIRGINIA/USA
 FL ITALIA S.P.A., VILLASTELLONE/I
 GINOUVES GEORGES SA, LA FARLEDE/F
 KUWAIT PETROLEUM R&T B.V., EUROPOORT RT/NL
 PETRO-CANADA LUBRICANTS, MISSISSAUGA/CDN
 PETRO-CANADA LUBRICANTS, MISSISSAUGA/CDN
 SHELL INTERNATIONAL PETROLEUM COMP LTD, LONDON/GB
 SHELL INTERNATIONAL PETROLEUM COMP LTD, LONDON/GB
 STATOIL LUBRICANTS, NYNÄSHAMN/S
 STATOIL LUBRICANTS, NYNÄSHAMN/S

Trade name (14B)

CHEVRON SYNTHETIC AUTOMATIC TRANSMISSION FLUID HEA
 AAMCO SYNTHETIC BLEND ATF
 ESSO ATF LT 71141
 EXXON SUPERFLOW SYNTHETIC ATF
 TUTELA HP 20
 YORK 886
 Q8 AUTO 15 ED
 MERCON V ATF
 VHVI DEXRON III ATF
 SHELL DONAX TX (G-32003)
 SHELL DONAX TX (G-34077)
 SYNTOMATIC
 TRANSWAY S DX II

Lubricant class 14C

Synthetic ATF in accordance with Group standard ZFN 13015

Manufacturer (14C)

AGIPPETROLI, ROME/I
 ARAL LUBRICANTS GMBH & CO. KG, BOCHUM/D
 AVIA MINERALÖL-AG, MÜNCHEN/D
 BP INTERNATIONAL, PANGBOURNE, READING/GB
 BUCHER AG LANGENTHAL, LANGENTHAL/CH
 CASTROL INTERNATIONAL, PANGBOURNE READING/GB
 CEPSA LUBRICANTS S.A., MADRID/E
 DEA MINERALOEL AG, HAMBURG/D
 EXXON MOBIL CORPORATION, FAIRFAX, VIRGINIA/USA
 EXXON MOBIL CORPORATION, FAIRFAX, VIRGINIA/USA
 FL ITALIA S.P.A., VILLASTELLONE/I
 FUCHS PETROLUB AG, MANNHEIM/D
 HUILES BERLIET S.A., SAINT PRIEST/F
 KOMPRESSOL-OEL VERKAUFS GMBH, KÖLN/D
 KUWAIT PETROLEUM R&T B.V., EUROPOORT RT/NL
 NEW PROCESS AG, TUBACH/CH
 OMV AG, SCHWECHAT/A
 ORLY INTERNATIONAL G.I.E., VIEUX-THANN/F
 PAKELO MOTOR OIL S.R.L., SAN BONIFACIO (VR)/I
 PAKELO MOTOR OIL S.R.L., SAN BONIFACIO (VR)/I
 PANOLIN AG, MADETSWIL/CH
 RAFINERIA NAFTY JEDLICZE SA, JEDLICZE/PL
 REPSOL LUBRICANTES, MADRID/E
 S.A.E.L., MADRID/E
 SHELL INTERNATIONAL PETROLEUM COMP LTD, LONDON/GB
 SLOVNAFT VURUP A.S., BRATISLAVA/SK
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/D
 TEXACO BELGIUM N.V., GHENT/B
 TOTALFINAELF LUBRIFIANTS S.A.; PARIS/F
 TOTALFINAELF LUBRIFIANTS S.A.; PARIS/F
 TOTALFINAELF LUBRIFIANTS S.A.; PARIS/F
 VALVOLINE EUROPE, DORDRECHT/NL
 VEEDOL INTERNATIONAL, PANGBOURNE READING/GB
 ZF FRIEDRICHSHAFEN AG, FRIEDRICHSHAFEN/D

Trade name (14C)

ATF II E *
 ARAL GETRIEBEÖL ATF E-S *
 AVIA FLUID ATF 92 S *
 BP AUTRAN LFT *
 MOTOREX ATF II E SYNTHETIC *
 CASTROL TRANSMAX Z
 CEPSA ATF SYNTHETIC *
 DEAFLLUID S
 ESSO ATF LDS *
 MOBIL ATF SHC E-25300 *
 TUTELA TRUCK ATF 90 *
 TITAN ATF 5000 SL *
 HRD STARMATIC S2 *
 KOMPRESSOL-DEXRON SYNTH LTF *
 Q8 AUTO 14 SYNTHETIC *
 ATF SYNTH *
 OMV ATF-S *
 ORLY MATIC ATF DEXRON II E *
 PAKELO AUXON II E *
 PAKELO DX FLUID II TS *
 PANOLIN ATF SYNTH *
 HIPOL ATF II E *
 MATIC SINTEETICO *
 GULF ATF SYNT *
 SHELL ATF XS *
 MADIT AUTOMATIC II E *
 WINTERSHALL ATF DEXRON S *
 TEXAMATIC S *
 ELFMATIC G2 SYN *
 FINAMATIC S 6726 *
 TOTAL FLUIDE SYN FE *
 VALVOLINE SYNPOWER ATF *
 VEEDOL UNITRANS Z
 ZF ECOFLUID A

* Not approved for special transmissions with ratio $i=5.6-0.83/1.0$

Recommended oil and filter change intervals for Ecomat transmissions:

Lubricant class (For approved trade products, see pages 2 and 3)	Oil and filter change interval [km/year]		Operating hours data for construction machines
	Normal operating conditions	Tough operating conditions	
14A (also applies for monograde engine oils SAE 10W)	30.000 km 1 x year	20.000 km 1 x year	1000 h
14B	60.000 km 1 x every 2 years	45.000 km 1 x every 2 years	2000 h
14C	120.000 km 1 x every 2 years	90.000 km 1 x every 2 years	3000 h

Note:

When change-over is effected from a mineral oil-based oil to a semi-synthetic, hydrocracked or synthetic ATF an intermediate oil change interval is necessary at half the usual performance or service time.