



Commercial Vehicle and
Special Driveline Technology

Powershift transmissions, type EcoLife, for buses

List of lubricants TE-ML 20

1. Vehicle classification

EcoLife transmissions are operated under loads and at oil temperatures which vary significantly. Oil releases and oil-change intervals are therefore vehicle-dependent. Consult the owner's manual for your vehicle to check whether TE-ML 20.100, 20.105 or 20.110 applies.

2. Approved lubricant classes for EcoLife

Product groups	Vehicle classification acc. to owner's manual	Lubricant classes for service fill (1)
EcoLife 6AP1000B, 6AP1200B, 6AP1400B, 6AP1700B, 6AP2000B and accessory bevel-gear variants	TE-ML 20.100	20E / 20F
	TE-ML 20.105	20E / 20F
	TE-ML 20.110	20F

(1) Refer to the following pages for approved commercial products and oil change intervals.

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.

The list of lubricants TE-ML 20, **Edition 01.10.2010** 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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3. Oil and filter change intervals for buses:**Table 1: Vehicle classification TE-ML 20.100 (Oil sump temperatures up to 100°C)**

Lubricant class (1)	Oil and pressure filter change interval [km/year] (2)
20E	240.000 km 1 x every 3 years
20F	240.000 km 1 x every 3 years

Table 2: Vehicle classification TE-ML 20.105 (Oil sump temperatures up to 105°C)

Lubricant class (1)	Oil and pressure filter change interval [km/year] (2)
20E	180.000 km 1 x every 3 years
20F	180.000 km 1 x every 3 years

Table 3: Vehicle classification TE-ML 20.110 (Oil sump temperatures up to 110°C)

Lubricant class (1)	Oil and pressure filter change interval [km/year] (2)
20F	120.000 km 1 x every 3 years

(1) Refer to the following pages for approved commercial products and oil change intervals.

(2) Oil and filter change required, depending on what occurs first. Use only ZF original filter elements, ZF order no. 4181 298 002.

Lubricant class 20E**Manufacturer (20E)**

PETRONAS LUBRICANTS INTERN., KUALA LUMPUR/MAL
SHELL INTERNATIONAL PETROLEUM COMP LTD, LONDON/GB
SHELL INTERNATIONAL PETROLEUM COMP LTD, LONDON/GB
ZF FRIEDRICHSHAFEN AG, FRIEDRICHSHAFEN/D

Trade name (20E)

TUTELA TRUCK ATF 120
SHELL DONAX TZ
SHELL SPIRAX S6 ATF ZM
ZF-ECOFLUID A PLUS

Lubricant class 20F

Manufacturer (20F)

ZF FRIEDRICHSHAFEN AG, FRIEDRICHSHAFEN/D

Trade name (20F)

ZF-ECOFUID LIFE