



ZF mineral oils – and things run like clockwork!

The types of mineral oil, ZF Ecofluid X and ZF Powerfluid, were specially developed for applications in ZF bus axles and ZF construction machinery transmissions/axles. It is only these oils which ensure the best running characteristics and availability needed for buses and construction machines.

For their fleet operators, machines and vehicles must need only low-maintenance, be rugged and have a long service life as well as featuring optimum performance and high reliability in operation. In this respect the choice of the correct lubricants lends an important contribution to improving the performance, comfort and economic efficiency of the fleet. In addition, axles and transmissions are being subjected to ever increasing stresses and therefore need special lubricants which meet these requirements.

ZF Ecofluid X and ZF Powerfluid were developed with this in mind. They also offer vehicle operators the largest possible freedom with intervals between oil changes as well as the assurance of having the best possible protection for their ZF components.

ZF Friedrichshafen AG

ZF Services
Donaustr. 71
94034 Passau
Germany
Phone +49 851 494-2764
Fax +49 851 494-2019
www.zf.com



ZF Mineral Oils for
ZF Bus Axles and ZF Construction
Machinery Transmissions/Axles



Subject to technical changes.

ZF-ECOFLUID X ZF-POWERFLUID



With new, improved formula!

MAI / OIL 07 / E



Driveline and Chassis Technology

Benefit from the advantages of the genuine products!



What ZF mineral oils have to offer:

- Tailor-made formulas for top-of-the-line requirements
- Enhanced transmission service life time thanks to highly efficient additives and extremely high shear stability
- Less downtime due to uniformly specified oil for axles and transmissions
- Excellent corrosion protection protects against rust and attacks on non-ferrous heavy metal
- Very high wear protection level
- Environmentally-friendly and cost-reducing thanks to long oil change intervals
- Worldwide availability via the ZF Customer Service
- Worldwide guaranteed and continuously monitored ZF premium quality

Have a word with your ZF Service Partner or contact ZF Passau directly.

	ZF-ECOFLUID X	ZF-POWERFLUID
Oil type	Axle drive fluid (GL-5)	Universal construction machine fluid
SAE Class	80W90	80W
Main area of application	ZF-Axles for buses	ZF-Axles and converter transmissions for construction machinery
Special features	<ul style="list-style-type: none"> ■ Optimum bearing and gearing protection with regard to wear and scuffing 	<ul style="list-style-type: none"> ■ Optimum scoring load capacity ■ Very high wear protection level ■ Combines high level of transmission shift comfort with excellent brake behaviour of the axles
Typical features		
Density	898 kg/m ³	881 kg/m ³
Viscosity at 40°C	142 mm ² /s	69 mm ² /s
Viscosity at 100°C	15.6 mm ² /s	9.2 mm ² /s
Brookfield viscosity	-26°C: 120,000 mPas	-30°C: 55,000 mPas
Pour point	-30°C	-42°C
Flash point	200°C	230°C
Shear stability (100°C viscosity after taper-roller bearing shear test)	14.5 mm ² /s	8.7 mm ² /s
Packaging sizes and order numbers	Canister (20 l) Ref. 0681 000 412 Barrel (205 l) Ref. 0681 000 411 Container (1,000 l) Ref. 0681 000 410	Canister (20 l) Ref. 0681 000 402 Barrel (205 l) Ref. 0681 000 401 Container (1,000 l) Ref. 0681 000 400

You can also obtain the latest information from the ZF list of lubricants.