

TITAN FFL-3

Premium Performance DCTF. Specially developed for ZF/Porsche Double Clutch Transmission with wet clutch.

Description

TITAN FFL-3 is a special transmission oil that was developed exclusively for use in manual and dual-clutch ZF transmissions (DCT). The exclusive and innovative additive technology was adapted to the high and diverse demands of ZF transmissions in coordination with ZF. The special additive technology offers optimum friction value performance and ensures that the shifting processes are precise and as fast as possible even in very demanding situations. TITAN FFL-3 does of course meet the exacting standards in terms of compatibility with non-ferrous metals and the electronic components, which is enormously important for the functioning of the electrical/hydraulic control circuit.

Application

TITAN FFL-3 was developed specifically for use in ZF dual-clutch transmissions and manual transmissions. Consequently, TITAN FFL-3 is the only product that has been exclusively approved for use in ZF 7-speed dual-clutch transmissions pursuant to ZF TE-ML 11. This line of transmissions is installed into a wide range of Porsche models (Porsche PDK).

Furthermore, TITAN FFL-3 has been exclusively approved for ZF S6-35/ S6-45 manual transmissions, which are utilized by manufacturers such as BMW, Mercedes Benz and Jaguar Land Rover. The product must be homogenized before use. To warrant the perfect functioning of the transmissions, TITAN FFL-3 must not be blended for use with other transmission oils. For safety and disposal instructions, please refer to the latest safety data sheet.

Note: This product has been previously marketed under PENTOSIN FFL-3.

Advantages/Benefits

- The friction value characteristics are specifically matched with ZF dual-clutch transmission systems → the result: optimum shifting performance even under maximum stress and taxing sporty driving demands
- Combines outstanding wear and tear prevention with excellent friction stability
- Reliably prevents corrosion and sludge deposits
- Excellent compatibility with non-ferrous heavy metals and electronic components of the hydraulic control circuit
- Optimized foaming properties
- Depending on OEM requirements also suitable for selected transmissions in hybrid and electric vehicles

Specifications

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Approvals

- MB-APPROVAL 236.24
- ZF TE-ML 11 (ZF004742)

FUCHS Recommendations

- BMW 83 22 2 156 969 (MTF-LT-5)
- BMW 83 22 2 167 666 (MTF-LT-5)
- JAGUAR LAND ROVER GX73-M1R564-AA
- PORSCHE 999 917 080 00

TYPICAL CHARACTERISTICS

Density at 15 °C	DIN EN ISO 12185	842 kg/m ³
Kinematic viscosity at 40 °C	DIN EN ISO 3104	34.7 mm ² /s
Kinematic viscosity at 100 °C	DIN EN ISO 3104	7.0 mm ² /s
Viscosity index	DIN ISO 2909	168
Pour point	ISO 3016	-54 °C
Product dyeing	DIN 10964	none

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Product Information



The information contained in this product information is based on the experience and know-how of FUCHS PETROLUB SE in the development and manufacturing of lubricants and represents the current state-of-the-art. The performance of our products can be influenced by a series of factors, especially the specific use, the method of application, the operational environment, component pre-treatment, possible external contamination, etc. For this reason, universally-valid statements about the function of our products are not possible. Our products must not be used in aircrafts/spacecrafts or their components, unless such products are removed before the components are assembled into the aircraft/spacecraft. The information given in this product information represents general, non-binding guidelines. No warranty expressed or implied is given concerning the properties of the product or its suitability for any given application.

We therefore recommend that you consult a FUCHS PETROLUB SE application engineer to discuss application conditions and the performance criteria of the products before the product is used. It is the responsibility of the user to test the functional suitability of the product and to use it with the corresponding care.

Our products undergo continuous improvement. We therefore retain the right to change our product program, the products, and their manufacturing processes as well as all details of our product information sheets at any time and without warning, unless otherwise provided in customer-specific agreements. With the publication of this product information, all previous editions cease to be valid.

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