

Product Information

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TITAN FFL-4

Premium Performance DCTF. Specifically developed for GETRAG/BMW double-clutch transmissions with wet clutch.

Description

TITAN FFL-4 is a special transmission oil that was developed in an exclusive partnership with GETRAG /BMW for the specific demands of GETRAG/BMW double-clutch transmissions. TITAN FFL-4 was developed to meet modern requirements; it is based on selected base oils and state-of-the-art additive technology. It ensures optimum friction properties and precise/fast shifting even under the most extreme loads. Moreover TITAN FFL-4 meets the complex non-ferrous metal and electronic component requirements, which are of critical importance for the proper functioning of the electrical/hydraulic control circuit. TITAN FFL-4 offers optimum wear and tear protection throughout the component's life cycle.

Application

TITAN FFL-4 was developed specifically for use in GETRAG's 7-speed double-clutch transmission (longitudinal installation) with wet clutch, installed in a variety of BMW M class models. The product must be homogenized before use. To maintain the unobjectionable operation of the transmission, TITAN FFL-4 must not be mixed with any other transmission oil. For information on product safety and proper disposal please refer to the latest Material Safety Data Sheet. Note: This product was previously marketed as PENTOSIN FFL-4.

Advantages

- Friction characteristics specifically optimised for the GETRAG/BMW double-clutch system.
- Excellent friction stability for constantly smooth gear shifting throughout the oil drain interval.
- Excellent wear protection.
- Superior protection against foaming.
- Outstanding compatibility with non-ferrous metals and electric components of hydraulic control circuits.
- For exclusive use in double-clutch transmissions of BMW M class models!

Specifications

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Approvals

- GETRAG (PWA05043)

FUCHS Recommendations

- BMW 83 22 0 440 214
- BMW 83 22 2 147 477
- BMW 83 22 2 148 578
- BMW 83 22 2 148 579
- BMW 83 22 2 446 673
- FORD WSS-M2C936-A
- McLaren: MP4-12C
- MITSUBISHI DIA QUEEN SSTF-1
- PSA 9734 S2
- VOLVO 1161838

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TYPICAL CHARACTERISTICS

Density at 15°C	DIN EN ISO 12185	842 kg/m ³
SAE Grade	SAE J306	75W
Kinematic Viscosity at 40°C	DIN EN ISO 3104	35.8 mm ² /s
Kinematic Viscosity at 100°C	DIN EN ISO 3104	7.1 mm ² /s
Viscosity Index	DIN ISO 2909	167
Pour Point	ISO 3016	-57 °C
Product Dyeing	DIN 10964	none

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Notes

The information contained in this product information is based on the experience and know-how of FUCHS LUBRICANTS (UK) plc 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 aircraft or spacecraft. Our products may be used in manufacture of components for aircraft or spacecraft if they are removed without residue from the components prior to assembly into the aircraft or 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 LUBRICANTS (UK) plc 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.

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