G-Special FD-1 60

Main gears, differentials

On-board gearboxes

High wear protection

High-quality mineral base oil

Stable oil film

Improved extreme pressure and anti- pitting properties

G-Special FD-1 60 – transmission oil developed for use in main gears, differentials and on-board gearboxes of Caterpillar off-road vehicles. The oil allows achieving the maximum service life of powershift units and meets Caterpillar FD-1 requirements. It ensures higher protection of machinery units as compared to oils of the Caterpillar TO-4 class.

Применение

- Main gears, differentials and on-board gearboxes of Caterpillar machinery.
- Dump trucks, bulldozers, pipe-laying machines and other vehicles where the Caterpillar FD-1 oil is applicable.
- Not recommended for use in machinery units with friction elements.
- Compatible with oil of the Caterpillar TO-4 level.

Characteristics/Potential benefits

The G-Special FD-1 60 oil with enhanced anti-wear and anti-scuffing components allows ensuring high powershift efficiency under severe operation conditions:

Characteristics	Potential benefits
Very high oil film stability	Keeps viscosity within the total oil drain interval protecting the units in different operation modes - the maximum service life of gearboxes
Possibility to change the oil drain interval	Operates up to two times longer than the Caterpillar TO-4 oils - reduction of costs for lubricants (as required by the manufacturer)
Enhanced extreme pressure and anti-wear properties	Maximum protection of gear wheels and bearings - additional maintenance savings
High corrosion and rust protection	Special components protect the structure elements
Low foaming tendency	Oil film retains - maximum protection of gearboxes
Excellent compatibility with sealing materials	The oil is inert to sealing materials and various elastomers, preventing leakages

Typical Characteristics

Properties	FD-1 60	Method
Kinematic viscosity @100 °C, mm^2/s	25,3	ASTM D 445
Brookfield dynamic viscosity @ -10°C, mPa*s	70 000	ASTM D 2983
Flash Point (COC), °C	280	ASTM D 92
Pour point, °C	-17	ASTM D 97
Density @15 °C, kg/m^3	903	ASTM D 4052

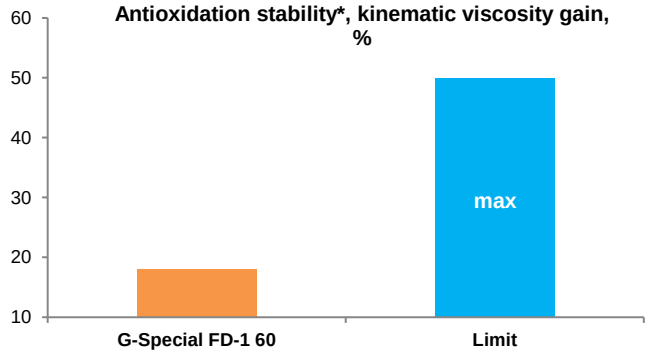
Specifications

- Caterpillar FD-1

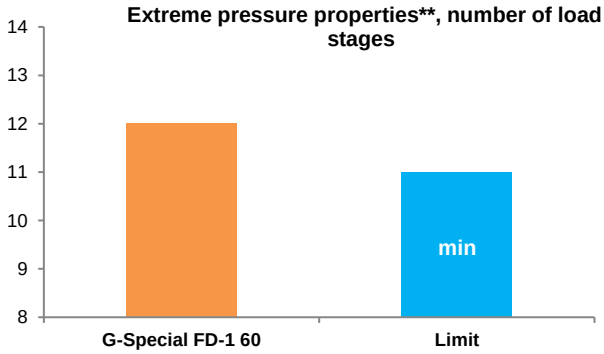
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The above data are typical for the currently manufactured products. Due to ongoing research and development, the information contained in this document can be changed. Information on the safe use of the product is contained in the Material Safety Data Sheet. For more information please contact the company's technical specialists. E-mail: Techservice@gazprom-neft.ru. 04/2021

G-Special FD-1 60 transmission oil exceeds the requirements of the main specification according to tests:



High antioxidation resistance ensures efficient operation of the oil within a long oil drain interval



High load-carrying capability reliably protects gearwheel and bearing units under very high loads

*Test ASTM D5704 Oxidation Stability (100h); **Test FZG D5182

Health, Safety & Environment

Information is provided for products in the relevant Safety Data Sheet (SDS). This provides guidance on potential hazards, precautions and first-aid measures, together with environmental effects and disposal of used products. SDS's are available upon request through your sales contract office. This product should not be used for purposes other than its intended use.

The company's management system is certified in accordance with the international standards

ISO 9001 ISO 14001 ISO/TS 16949 ISO 45001

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