

MTF Commercial Vehicle Manual Transmission Fluid

● Performance Overview

MTF Commercial Vehicle manual transmission fluid is a high performance oil designed for heavy commercial vehicle manual transmission. It provides comprehensive protection and long-term stability for its high torque, heavy load and complex operating conditions. The core properties include: ultra-high extreme pressure wear resistance: A solid lubrication film is formed in the high pressure contact area between gear meshing and synchronizer, which reduces direct friction between metals, reduces the wear rate by more than 40%, and extends the overhaul cycle of the gearbox.



● Features

01

It has excellent gearbox synchronization and shear resistance

02

Saves fuel, and can meet the needs of all-weather lubrication in different temperature areas.

03

Synchronizer compatible formula: Optimized friction coefficient for copper based synchronizer material to avoid copper component corrosion and excessive wear, suitable for mainstream commercial vehicle transmissions such as Fast, Eaton and ZF.

04

Long-term oil change cycle: the antioxidant performance is increased by 50%, and the recommended oil change cycle is 150,000 kilometers or 2 years (80,000 kilometers for ordinary mineral oil), reducing the cost of fleet operation and maintenance.

● Application Scenario

1. Long-distance freight trucks: to cope with continuous high torque output and complex road conditions, to ensure the reliability of the gearbox in mountainous areas, high-speed and other scenarios. Urban sludge truck/cement tank truck: adapt to frequent start and stop, heavy climbing and dusty environment, prevent abnormal gear wear and oil pollution.
2. Bus/bus: Optimize the ride comfort under frequent shifting and passenger load changes to reduce driver fatigue. School buses and tour buses: Ensure stable operation of transmissions under high safety requirements and reduce failure rates.
3. Mine dump truck/loader: withstand high vibration and high impact conditions to prevent gear pitting or spalling caused by oil film rupture. Fire trucks/emergency vehicles: maintain lubrication performance in extreme environments (high temperature, wading) to ensure the execution of emergency tasks.

MTF commercial vehicle manual transmission oil performance indicators

Project	Quality indicators		
Viscosity class	75W/90	80W/90	85W/90
Kinematic viscosity (100°C), mm ² /s	13.5~24.0	13.5~24.0	13.5~24.0
When the apparent viscosity reaches 150mpa·s, the temperature is not higher than °C	-40	-26	-12
Grooving point, °C is not higher than	-45	-35	-20
Flash point (opening) /°C not lower	165	175	185
Viscosity index is not less than	85	85	85
Corrosion test copper sheet (121°C, 3h), grade not greater than	2a		
Mechanical impurities, % not greater than	0.08		
Moisture, % not more than	vestige		
Storage stability			
Liquid precipitate, % (mass fraction) not greater than	0.5		
Solid precipitate, % (mass fraction) not greater than	0.25		
Foamability (tendency to foam), ml			
24°C is not greater than	20		
93.5°C is not greater than	50		
After 24°C is not greater than	20		
Seal fit test	pass		
Load capacity (CL-100 or FZG gear machine)			
Failure level is not less than	11		
Thermal oxidation stability (L-60-1 test)			
100°C kinematic viscosity increase, % is not greater than	100		
Pentane insoluble matter /% (mass fraction) is not greater than	3		
Toluene insoluble matter /% (mass fraction) is not greater than	2		
Sludge score is not less than	9.4		
Carbon/paint film score is not less than	7.5		
Thermal stability (MACK cycle test)	pass		