



SUPREME ZF

Supreme Performance Zinc-free and Chlorine-free
Railroad Engine Oils

Product Overview

The SUPREME ZF are supreme performance, zinc-free and chlorine-free oils specially designed to provide excellent engine cleanliness and oil filter life in the modern railroad diesel locomotive engines being employed in severe service. They are formulated with an additive package endorsed by engine manufacturers' and meet the requirements of newer diesel locomotive engines of General Electric (GE) and ElectroMotive Division (EMD) of General Motors. Though the newer engines consume significantly less oil and operate at higher temperatures, the excellent TBN retention property and improved oxidation resistance of SUPREME ZF Series provide superior service and facilitate extended drain intervals.

They exceed the performance requirements of Locomotive Maintenance Officers Association (LMOA) Generation 5 and API CF/CF-2 and are available in viscosity grades SAE 40 & SAE 20W-40 in both TBN 13 & 17.

Benefits

- Excellent detergency/dispersancy provides excellent engine cleanliness, especially engine top decks
- Excellent in-service retention of TBN facilitates extended drain intervals
- High thermo-oxidative stability protects against sludge formation providing cleaner engines
- Zinc-free formulation protects silver bearings against corrosion
- Non-chlorinated additive package helps in reducing used oil disposal costs

Applications

- Railroad diesel locomotive engines operating under severe conditions and specifying LMOA Generation 5 quality oils
- Medium speed two-cycle and four-cycle railroad engines, including newer diesel locomotive engines of GE and EMD of General Motors
- Detroit Diesel 149 series engines operating under severe conditions

Health and Safety

This lubricant is unlikely to produce any significant health or safety hazard when used in the application it has been designed for and according to the recommendations provided in the Material Safety Data Sheet. MSDS are available upon request through your sales advisor.

When disposing of used oil, please observe all current regulations and protect the environment.

SUPREME ZF SERIES

Meets or exceeds the following industry Specifications

API Grade	40	40	20W-40	20W-40
TBN	13	17	13	17
LAMOA Generation 5	✓	✓	✓	✓
API CF, CF-2	✓	✓	✓	✓
CATERPILLAR 3600	✓	✓	✓	✓
EMD of General Motors	✓	✓	✓	✓
GE as Generation 4 Long Life Oils	✓	✓	✓	✓

Typical properties

Test parameters	Method				
Viscosity @ 40 °C, cSt	ASTM D 445	150	150	140	140
Viscosity @ 100 °C, cSt	ASTM D 445	14.6	14.6	15.5	15.5
Viscosity Index	ASTM D 2270	96	96	114	114
Zinc, ppm	ICP	<10	<10	<10	<10
Flash Point, °C	ASTM D 92	>220	>220	>220	>220
Pour Point, °C	ASTM D 97	-18	-18	-18	-18
Density @ 15 °C, Kg/m3	ASTM D 4052	898	903	918	920
TBN, mg KOH/g	ASTM D 2896	13.2	17.1	13.2	17.1

Above characteristics are mean values given as information. They do not constitute a specification.