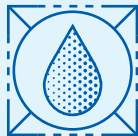




CITGO® RD-969 and RD-1069 Diesel Engine Oils

OVERVIEW



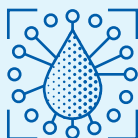
- High-dispersancy, reduced-ash engine oils intended for use in railroad locomotive diesel engines and other medium-speed stationary and marine diesel engines of similar design.
- Meet the LMOA Generation 6 (GE Generation IV Long Life) quality requirements with the Oronite OLOA 40000 additive system.

FEATURES & BENEFITS



- Improved detergent/dispersant dramatically improves cleanliness, with outstanding protection from deposits.
- Superior oxidation inhibition and thermal stability prevent excessive viscosity increase.
- 9 TBN designed for low and ultra-low sulfur fuels.
- Non-zinc formulation protects silver bearing materials.
- Non-chlorinated to reduce cost of recycling used oil.
- High viscosity index base oils in both grades improve oxidation resistance and low-temperature performance.
- Maximum oil drain intervals.
- Enhanced particulate matter emissions control.
- Performance capabilities:
 - LMOA Generation 6
 - EMD approved for Pointers Listing
 - GE Generation IV Long Life

APPLICATIONS

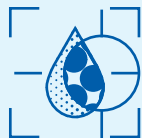


- Meet the specifications of the major railroad diesel engine builders including General Electric and Progress Rail, a Caterpillar company (formerly EMD).
- Meet the requirements of the manufacturers of many large medium-speed diesel engines used in marine and stationary service.
- Provide superior lubrication of most diesel engines used in inland marine service in towboats and work boats.

Recommended for:

General Electric diesel	EMD diesel
ALCO diesel	Enterprise diesel
Fairbanks-Morse diesel	Superior diesel
Colt Pielstick	Sulzer diesel
Baldwin-Lima-Hamilton	

PROPERTIES



Typical Properties for CITGO RD-969 and RD-1069 Diesel Engine Oils:

Product	RD-969	RD-1069
SAE Grade	40	20W-40
Material Code	649069001	649269001
Gravity, ASTM D4052, °API	28.7	29.3
Gravity, ASTM D1298, Specific 60/60°F	0.8833	0.8800
Density, lbs./gallon	7.35	7.33
Flash Point, ASTM D92, COC, °F (°C)	518 (270)	482 (250)
Viscosity, ASTM D445		
cSt at 40°C	144	134
cSt at 100°C	14.8	15.1
Viscosity Index, ASTM D2270	102	116
ASTM D5293, CCS, cP at -15°C	—	6,800
Pour Point ASTM D97, °F (°C)	0 (-18)	-11 (-24)
Color, ASTM D1500	D8	D8
Sulfated Ash, ASTM D874, m%	1.0	1.0
Total Acid No., ASTM D664, mg KOH/g	0.2	0.2
Total Base No., ASTM D2896, mg KOH/g	9.0	9.0
Zinc, ppm	<10	<10
Chlorine, ppm	<50	<50

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