

AMALIE

Better than it has to be®
Since 1903



9TBN RAILROAD DIESEL ENGINE OILS

AMALIE 9 TBN Railroad Diesel Engine Oils represents the latest advancement in zinc free railroad diesel engine oil technology. It is a unique formulation that is optimized to satisfy EPA emission requirements. The advanced technology provides superior liner scuffing protection, reduced rain wear, and reduced piston deposits. Improved thermal and oxidation stability minimizes oil degradation, reduces sludge formation. This provides longer drain intervals and improved filter life. This oil is designed to meet the changing needs of today's railroad diesel engines in light of progressive emission standards and the use of low sulfur and ultra low sulfur fuels. It offers reduced SAPS (sulfated ash, phosphorous and sulfur), advanced detergency and dispersancy technology and increased yellow metal anti-wear protection critical to satisfactory operation and long component life of exhaust after treatment devices such as particulate filters and oxidation catalysts. The exceptional Total Base Number retention and oil consumption reduction characteristics of the oil are directly linked to its superior oxidation control, viscosity retention, shear stability, acid production control and wear protection. These engine oils offer the highest levels of oil performance and quality to ensure superior engine productivity, maximum power utilization and reduced life-cycle maintenance costs. This oil is specifically designed for use in medium-speed two-cycle and four-cycle diesel engines such as those typically employed in railroad locomotives and certain marine applications. Recommended applications include Electro-Motive Diesel (EMD) generation V, LMOA Generation V, General Electric Generation 4 Long Life, Alco, Baldwin, and Fairbanks-Morse engines. **AMALIE 9 TBN Railroad Diesel Engine Oils** is offered in SAE 40 and SAE 20W40 viscosity grades.

13 TBN RAILROAD DIESEL ENGINE OIL

AMALIE 13 TBN Railroad Diesel Engine Oil has outstanding high dispersancy and high alkalinity, for use in diesel engines used in railroad, power generation, oil well drilling, and marine and industrial service requiring a zinc-free oil and Generation 4 LL or Generation 5 lubricant characteristics. These oils represent the standard in oil technology for this type of service and satisfy the requirements of older as well as the newest engine technology. This engine oil is manufactured using the highest quality base oils and a non-chlorinated additive package that offers low engine wear and minimizes used oil disposal issues. New engine designs, aimed at reducing operating expenses, operate at higher combustion pressures and higher temperatures which require improved oxidation and viscosity control. Increased alkalinity reserve serves to control corrosive wear and deposit formation required by new piston and ring designs. This advanced formulation is designed to successfully handle these requirements by providing outstanding resistance to viscosity increase due to superior oxidation and thermal stability, and by providing a high alkalinity level (13 TBN by ASTM D 2896). **AMALIE 13 TBN Railroad Diesel Engine Oil** is offered in SAE 40 Viscosity range, and is recommended for use in all railroad-type diesel engines for locomotive, marine equipment, stationary electric generating plants, offshore drilling equipment, and many other applications where large medium-speed EMD or GE diesel engines are used for primary power. It's completely compatible with earlier railroad oils, miscible with competitive railroad type oils and additive systems consistent with engine manufacturers recommended practices. This oil provides excellent performance in older locomotive types such as Sulzer, Baldwin, and ALCO. They are recommended for use in Caterpillar and other diesel engines operating where sulfated ash levels above 1% are acceptable and where DDC engines are used for auxiliary power. Detroit Diesel Corporation approves the use of Generation 4 and 5 zinc-free railroad engine oils in these applications.

17 TBN RAILROAD DIESEL ENGINE OILS

AMALIE 17 TBN Railroad Diesel Engine Oils have outstanding high dispersancy, high alkalinity, for use in diesel engines used in railroad, power generation, oil well drilling, and marine and industrial service requiring a zinc-free oil and Generation 4 LL or Generation 5 lubricant characteristics. These oils represent the standard in oil technology for this type of service and satisfy the requirements of older as well as the newest engine technology. These Engine Oils are manufactured using the highest quality base oils and a non-chlorinated additive package that offers low engine wear and minimizes used oil disposal issues. New engine designs, aimed at reducing operating expenses, operate at higher combustion pressures and higher temperatures which require improved oxidation and viscosity control. In addition, new piston and ring designs call for increased alkalinity reserve to control corrosive wear and deposit formation. This advanced formulation is designed to successfully handle these new requirements by providing outstanding resistance to viscosity increase due to superior oxidation and thermal stability, and by providing increased alkalinity level (17 TBN by ASTM D 2896). **AMALIE 17 TBN Railroad Diesel Engine Oils** are offered in SAE 40 and SAE 20W40 Viscosity ranges. These oils are recommended for use in all railroad-type diesel engines for locomotive, marine equipment, stationary electric generating plants, off-shore drilling equipment, and many other applications where large medium-speed EMD or GE diesel engines are used for primary power. These oils are completely compatible with earlier railroad oils, miscible with competitive railroad type oils and additive systems consistent with engine manufacturers recommended practices. These oils provide excellent performance in older locomotive types such as Sulzer, Baldwin, and ALCO. In addition these oils are recommended for use in Caterpillar and other diesel engines operating where sulfated ash levels above 1% are acceptable and where DDC engines are used for auxiliary power. Detroit Diesel Corporation approves the use of Generation 4 and 5 zinc-free railroad engine oils in these applications.



MADE IN U.S.A.



RAILROAD DIESEL ENGINE OILS

VISCOSITY	PACK SIZE	PART #
40 - 9 TBN	55 Gallon Drum	160-62143-05
40 - 13 TBN	55 Gallon Drum	160-62243-05
40 - 17 TBN	55 Gallon Drum	160-69943-05
20W-40 - 9 TBN	55 Gallon Drum	160-62183-05
20W-40 - 17 TBN	55 Gallon Drum	160-69983-05

Always refer to your vehicles operating manual to select the correct grade of oil for your engine. The data presented herein are believed to be accurate; however, Amalie Oil Company shall not be liable for its content and makes no warranty with respect thereto.