## EMD/TRANS ENGINE OIL MARINE/RAILROAD & INDUSTRIAL [13 TBN]

## Typical Properties

SAE Grade Engine Class	<i>30</i>	40	20W-40
Viscosity, cSt			
At 40 C	135	180	126
At 100 C	12.1	14.5	14.8
Viscosity Index	76	77	120
Flash Point, (COC) Deg F	465	465	455
Pour Point, Deg F	-5	0	-5
TBN, ASTM D 2896	13	13	13
Ash, %wtSulfated	1.5	1.5	1.5
Zinc Content, ppm	<10	<10	<10
Gravity, API @ 60 F	27	24	26

The values shown are typical of current production. Some are controlled in the manufacturing process, while others are not. All of them may vary within tolerable ranges.

Outstanding high-dispersancy, high-alkalinity crankcase oil for railroad and marine diesel engines. SAE Grades 30 and 40 are compounded from MVI Base (Mixed-Base/Paraffinic-Napthenic) Oils to reduce hard carbon deposit formation in the ring belt area to minimize port blocking in 2-stroke cycle diesel engines. Multigrade 20W-40 is formulated with a shear stable VI Improver to provide better oil flow and lubrication at lower temperatures. All SAE grades contain detergent, dispersant, anti-wear, anti-oxidant, corrosion inhibitor, and foam-suppressant additives. The additive system used does NOT contain 'zinc-compound' derivatives.

## **APPLICATIONS**

Recommended for use in Electro-Motive Division of General Motors Corporation (EMD), Caterpillar, General Electric, and other diesel engines operating on higher than normal sulfur distillate-fuel where sulfated ash of +1% is acceptable. The SAE straight grades are highly recommended for medium speed industrial engines such as Fairbanks-Morse opposed-piston (OP) engines for which a medium viscosity index oil is the preferred product. In many marine applications this product can be used in both main propulsion engines as well as auxiliaries. Meets API Service Classification Level "CF" and obsolete "CD".

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