



# DDS Plus Railroad Engine Oils

9140, 9142 & 9144

Tier IV--11BN

## DDS Plus Railroad Engine Oils

### Benefits:

- Designed to meet the stringent performance requirements of new / remanufactured Tier 4 locomotives utilizing ULSD and operating under more severe conditions with less oil consumption and lower emissions
- Offer reduced SAPS (sulfated ash, phosphorous and sulfur)
- Advanced detergency and dispersancy technology
- Increased yellow metal and anti-wear protection critical to satisfactory operation and long component life of exhaust after treatment devices (particulate filters and oxidation catalysts)
- Enhanced alkalinity (BN) retention and oil consumption reduction characteristics

### Applications:

- LMOA Generation 7
- Specifically designed for use in medium-speed two-cycle and four-cycle diesel engines such as those typically employed in railroad locomotives, certain marine and stationary diesel engine applications
- Backwards compatibility and increased benefits to older model EMD and GE engines when combined with used oil trend analysis and condition based monitoring
- For use in a wide variety of locomotive applications including 'legacy' models (Detroit Diesel, ALCO, Fairbanks Morse)

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Properties	Test Method	DDS Plus 9140	DDS Plus 9142	DDS Plus 9144
Grade		SAE 20W-40	'FM' 40	SAE 40
API Gravity, 60°F	ASTM D-4052	27.9	27.8	27.6
Density, lbs/gal	Calculated	7.40	7.41	7.41
Viscosity, cSt @ 40°C	ASTM D-445	143	139	141
Viscosity, cSt @ 100°C	ASTM D-445	15.3	14.7	14.7
Viscosity Index	ASTM D-2270	111	108	102
Color	ASTM D-1500	Opaque	Opaque	Opaque
Pour Point, °F (°C)	ASTM D-5949	0 (-18)	0 (-18)	-15 (-26)
Flash Point, °F (°C)	ASTM D-92	450 (232)	450 (232)	450 (232)
TBN, (mg KOH/g)	ASTM D-2896	11	11	11
Sulfated Ash, wt.%	ASTM D-874	1.15	1.15	1.15
Zinc, ppm (max)	Method 16	10	10	10
<b>Product Code</b>		<b>7287</b>	<b>7288</b>	<b>7289</b>

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