



## Super HD II Diesel Engine Oil

Phillips 66® Super HD II Diesel Engine Oil is a high-quality universal fleet engine oil designed for use in on-highway diesel trucks and off-highway diesel equipment, as well as in passenger cars and light trucks with either diesel or gasoline engines. It is recommended for use both in EGR-equipped diesel engines and in older, non-EGR diesel engines. It also will provide excellent protection for gasoline engines for use in mixed commercial fleets.

Super HD II is formulated with advanced additive technology to provide excellent wear protection, soot control and bearing corrosion protection. It has excellent soot dispersancy to protect against abrasive wear and soot-induced oil thickening, and excellent oxidation resistance to help minimize deposit formation.

Super HD II meets or exceeds the performance requirements of API Service Categories CI-4 and SL, API CI-4 PLUS and leading OEM specifications for diesel engine oils. It is backward serviceable for use where API CH-4 or earlier "C" category engine oils, or the concurrent earlier OEM specifications, are specified.

### Applications

- On-highway diesel trucks equipped with cooled-EGR, ACERT or other technologies to meet 2004 and earlier exhaust emission standards
- Older diesel equipment with conventional, non-EGR engines
- Mixed fleets with both diesel and gasoline-fueled vehicles
- Off-highway construction, earth moving and mining equipment
- Farm equipment with diesel or gasoline engines

Super HD II Diesel Engine Oil is licensed or OEM-certified for:

- API Service CI-4 with CI-4 PLUS, CI-4, CH-4, SL
- Mack EO-N Premium Plus 03
- Volvo VDS-2

Super HD II Diesel Engine Oil meets or exceeds the requirements of:

- ACEA E7-04, E5-02, E3-96
- Caterpillar ECF-2, ECF-1-a
- Cummins CES 20078
- MAN 271, 3275
- MTU MTL 5044 Type 2
- Diesel engines manufactured by OEMs not listed above, including International (Navistar), John Deere, Hino, Komatsu, Kubota and others

## Universal Fleet Engine Oil





## Features/Benefits

- Outstanding soot control for protection against abrasive wear and soot-induced oil thickening
- Excellent resistance to viscosity and thermal breakdown at high temperatures
- Protects against sludge and varnish formation
- Excellent wear protection
- High shear stability
- Excellent rust and bearing corrosion protection
- Good low-temperature pumpability, even with soot-laden oil
- Good resistance to foaming and aeration
- Extended drain capability for non-EGR diesel engines

## Super HD II Diesel Engine Oil

Typical Properties	
<b>SAE Grade</b>	<b>15W-40</b>
Specific Gravity @ 60°F	0.879
Density, lbs/gal @ 60°F	7.32
Color, ASTM D1500	L 4.0
Flash Point (COC), °C (°F)	240 (464)
Pour Point, °C (°F)	-39 (-38)
Viscosity, Kinematic	
cSt @ 40°C	117
cSt @ 100°C	15.4
Viscosity Index	138
Cold Cranking Viscosity, cP @ -20°C	6,250
High-Temp/High-Shear Viscosity, cP @ 150°C	4.2
Sulfated Ash, ASTM D874, wt %	1.39
Total Base Number (TBN), ASTM D2896	11.0
Zinc, wt %	0.119

## Health & Safety Information

For recommendations on safe handling and use of this product, please refer to the Safety Data Sheet via <http://www.phillips66.com/EN/products/Pages/MSDS.aspx>.

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Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

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