## Sinclair HEAVY DUTY ENGINE OILS CI-4

Sinclair Synthetic Premium Heavy Duty Engine Oil SAE 5W-40 is our most advanced premium diesel oil. It exceeds API CJ-4 as required by modelyear 2007 and newer diesel engines equipped with advanced emission control systems. Fully backward compatible, it provides significant additional protection for older engines.

Synthetic 5W-40 withstands the stress of heat, soot, and acids far better than conventional oils to help prevent deposits, wear and corrosion. It's high quality synthetic base oil allows it to pump and flow faster to provide exceptional cold-weather starting and maximum fuel efficiency. Formulated with a highly shear-stable viscosity index improver and fortified with advanced detergents and soot dispersants, 5W-40 resists breakdown over extended drain intervals and offers up to 50 percent more engine wear protection compared with previous oil categories.

Sinclair Premium Plus LE Engine Oil 10W-30 EF CJ-4 is a premium diesel oil that meets the most stringent engine oil specifications available in today's market place. It meets or surpasses most domestic and imported heavy-duty truck manufacturers' warranty requirements including the new requirements for Exhaust Gas Recirculation (EGR) and new low emission engines with ULSD (2007 engines and later) equipped with Diesel Particulate Filters (DPF's). It provides excellent oil consumption control, protection against lowtemperature and high-temperature deposits, and provides the highest level of wear protection.



#### **APPLICATIONS**

- Where API CJ-4, CI-4, CH-4, CG-4, CF-4, CF-2, CF, CE, CD-II, CD or CC oils are recommended.
- Where API SN, SM, SL,SJ, SH, SG and SF oils are recommended.
- Recommended for use in Caterpillar, Cummins, Detroit Diesel\*\*, Mack, Navistar, Volvo and many imported diesel engines.
- Recommended for 2007 and newer engines with advanced emission control systems engines with Diesel Particulate Filters (DPF's), Exhaust Gas Recirculation (ÉGR), and Nitrous Oxides (NOx) Catalysts; pre-2007 engines using Ultra-Low Sulfur Diesel (ULSD) or Low Sulfur Diesel (LSD);extreme operating conditions including long hauls, heavy loads and all weather conditions.
- Perfect Product to use in Low Temperature applications due to the tremendous 5W pumpability of this oil in very cold conditions.
- The superior frictional properties of this oil provides improved fuel economy.

#### PERFORMANCE

Extended service intervals.

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- Excellent soot handling capability.
- Superior deposit control.
- Superior performance over a wide range of fuel sulfur content.

• Outstanding oil consumption control.

- Excellent wear protection. • Superb oxidation stability.

### SPECIFICATIONS/APPROVALS

- API CJ-4, CI-4 PLUS, CI-4, CH-4, CG-4, CF and SM, SL
- MACK
- Caterpillar
- Cummins **Detroit Diesel**
- MAN
- Mercedes Benz
- MTH
- Volvo
- JASO
- Renault ACEA
- Allison
- EO-O Premium Plus, EO-N Premium Plus 'O3, EO-M Plus, EO-M
- ECF-3, ECF-2, ECF-1-a
- CES 20081, 20077, 20076
- 93K218, 93K215, 93K214 3275
- 228.31
- Type I, Type II
- VDS-4, VDS-3, VDS-2
- DH-2
- RLD-3
- E9-08, E7-04, E4, E2
- C-4

# Sinclair CJ-4

#### TYPICAL PHYSICAL PROPERTIES

	METHOD	TYPICAL RESULTS			
Viscosity Grade		HD SAE 5W-40 CJ-4	HD SAE 10W-30 CJ-4		
Gravity, °API	ASTM D287	33.5723	31.48		
Specific Gravity @ 60°F (15.6°C)	ASTM D4052	0.8572	0.8682		
Viscosity @ 40°C cSt	ASTM D445	87.75	76.95		
Viscosity @ 100°C cSt	ASTM D445	14.76	11.93		
Viscosity Index	ASTM D2270	177	150		
High Temperature / High Shear Vis at 150°C, cP	ASTM D4683	3.5	3.5		
Noack Volatility, % loss	ASTM D5800	13	14.6		
Color	ASTM D1500	2.5	2.5		
Zinc, wt. %	ASTM D5185	0.127	0.1287		
Phosphorus, wt. %	ASTM D5185	0.115	0.115		
Calcium, wt. %	ASTM D5185	0.082	0.12		
Sulfur, wt. %	ASTM D4951	0.314	0.308		
Magnesium, wt. %	ASTM D5185	0.116	0.083		
Sulfated Ash, wt. %	ASTM D874	0.99	0.99		
Nitrogen, wt. %	ASTM D4629	0.124	0		
Pumping Viscosity at (°C), cP	ASTM D4684	24,113 (-35)	24,900 (-30)		
TBN, mgKOH/g	ASTM D2896	10	10		

Description	Pack Size	Part #	Each UPC	Case UPC	Case Dimensions	Case Cube / Pallet Cube	Case Weight / Pallet Weight	Pallet Stack
HD SAE 5W-40 CJ-4	6/1 Gallon	846-007	0 14168-01751 0	0 14168-01750 3	L 15.750 x W 13.125 x H 12.750	1.525 / 62.222	47.956 / 1726.409	36 Cases (4 layers of 9)
HD SAE 5W-40 CJ-4	55 Gallon	846-003	0 14168-01749 7	N/A	L 23.000 x W 23.000 x H 35.000	10.715 / 44.444	442.173 / 1768.792	4 Drums
HD SAE 10W-30 CJ-4	55 Gallon	583-003	0 14168-01754 1	N/A	L 23.000 x W 23.000 x H 35.000	10.715 / 44.444	441.132 / 1764.529	4 Drums

(America's

