

# ROYAL OIL CO.

SPECIALTY LUBRICANTS

## **SUPREME ULTRA MAX HD**

**Premium Engine Oil (CK-4)**

**Synthetic Blend**

**Superior Oxidation Control**

**Improved Shear Stability**

**Industry Leading  
Detergency Package**

**Cleans/Eliminates Deposits**

**For Diesel Engines Only**

*“After over a decade a new diesel engine oil specification has been introduced. CK-4 will be the required spec to meet for years to come for new diesel engines. Royal Oil Co. stepped up and developed an industry leading product to protect the hardest working engines in the most extreme conditions.”*



Supreme Ultra Max HD is Royal's answer for the new upgraded CK-4 diesel engine specification which it meets/exceeds. Our CK-4 engine oil is backwards compatible and is developed with everything you have come to expect from a Royal Oil product. It comes in two viscosities, 10W/30 and 15W/40 with most of today's new diesel engines calling for a 10W/30 engine oil.

Supreme Ultra Max HD is formulated for diesel engines only. It provides superior oxidation control, wear protection and shear stability. It offers users extended drain intervals of approximately 20% (we recommend using Royal Oil Co.'s oil analysis program for maximum oil life operation intervals). Supreme Ultra Max HD is for off-road and on-road diesel engines calling for a CK-4 engine oil.

Improved fuel economy has been seen through Supreme Ultra Max HD's ability to lower high temperature's and high shear viscosity during engine operation. If you're looking for an industry leading CK-4 engine oil that will exceed your expectations you have found it in Supreme Ultra Max HD.

# SUPREME ULTRA MAX HD

## Product Specifications

Meets and/or exceeds MIL-L-2104E, MIL-L-46152E, Caterpillar TO-2, Caterpillar ECF-2, Caterpillar ECF-3, Cummins CES 20081, Cummins CES 20086, Detroit Diesel Power Guard 93K214 and 93K218, Detroit Diesel DFS 93K222, Ford WSS-M2C171-F1, Mack EO-N Premium Plus, Mack EO-N Premium Plus 03, Mack EO-O Premium Plus 07, Mack EO-S-4.5, Navistar, ACEA E9/E7/E5/E3/B3/A3, MAN 3275, Mercedes Benz MB 228.31 and 229.1, MTU Type I and Type II, Volvo VDS-2, VDS-3 and VDS-4, Volvo VDS-4.5, Global DHD-1, Renault RLD-3, JASO DH-2, A.P.I. CG-4, CH-4, CI-4, CI-4 Plus, CJ-4, CK-4

		15W/40	10W/30
D-287	Specific Gravity @ 60°F	0.87	0.87
D-287	API Gravity	30.4	30.4
	Weight per Gallon	7.28 lbs./gallon	7.27 lbs./gallon
D-92	Flash Point	460°F/238°C	450°F/232°C
D-97	Pour Point, Typical	-32°F	-38°F
D-445	Viscosity @ 100°C	14.9cSt	11.8cSt
D-445	Viscosity @ 40°C	112.8cSt	80.7 cSt
D-2270	Viscosity Index	137	140
D-892	Foaming Tendency/Stability		
	Sequence I	0/0	0/0
	Sequence II	0/0	0/0
	Sequence III	0/0	0/0
	Calcium	0.24	0.24
	Zinc	0.12	0.12
	Phosphorus	0.10	0.10
	Sulfur	0.33	0.33
	Nitrogen	0.13	0.13
D-2896	Total Base Number (TBN)	10	10
D-664	Total Acid Number (TAN)	3	3
D-874	Sulfated Ash	1.0%	1.0%
D-7109	Orbahn Shear (90 Passes) Kinematic Viscosity @ 100°C	13.1cSt	10.7cSt
D-7109	Orbahn Shear (90 Passes) HTHS	3.9mPa-s	3.4mPa-s
D-5293	Cold Cranking simulator	@ -20°C 5770cP	@ -25°C 6550cP
D-4684	Mini Rotor Viscometer (MRV)	19500cP @ -25°C	21400cP @ -30°C
D-4684	MRV Yield Stress	< 35 Pa	<35 Pa
D-5800	NOACK Volatility	10%	11%
D-4683	High Temperature High Shear	4.2mPa-s	3.4mPa-s
D-6594	HTCBT @ 135°C		
	Copper	6 ppm	5 ppm
	Lead	11 ppm	7 ppm
D-130	Copper Strip Rating	1A	1A

Handling Information: For safe handling of the product, read the Safety Data Sheet (SDS)

Sharing lubricant knowledge and delivering the highest quality products, two things we promise our customers. The difference will change how you view, purchase and utilize greases and oils from here forward.

*Family owned and operated since 1926.*



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