



Product Data Sheet

DakotaSyn Full Synthetic 5W-40 CJ-4

Full Synthetic Diesel Engine Oil

PRODUCT DESCRIPTION

DakotaSyn Full Synthetic 5W-40 CJ-4 is an advanced full synthetic diesel engine oil engineered for fuel economy, wide temperature range performance and to protect all 2007 and newer model year low emission engines and their exhaust after treatment systems. This formulation was also designed to provide additional protection for older engines. The high TBN, outstanding TBN retention, and additional antioxidant, give DakotaSyn Full Synthetic 5W-40 CJ-4 the highest level of reserve quality.

DakotaSyn Full Synthetic 5W-40 CJ-4 is designed for longer engine life in fleet, construction, and agriculture equipment under severe service and extreme temperature conditions. This has been supported by extensive engine and field testing. The technology in DakotaSyn Full Synthetic 5W-40 CJ-4 has been proven to protect diesel particle filter (DPF) against ash buildup, in addition to improved engine protection from soot, deposits, varnish, wear, acid accumulation, TBN loss, viscosity shear loss, and oil consumption.

FEATURES AND BENEFITS

Fuel Economy	Demonstrated in engine and road test to provide up to 1.2% improved fuel economy. Compared to 15W-40 oils.
Emission and Catalyst Protection	Specifically designed to protect catalyst, particulate filters, and other emission components providing less engine down time.
Oil Durability	This full synthetic oil includes a special oxidation system provides longer oil and engine life at high temperatures.
Oil Pumpability	Exceeds the pumpability requirements of 5W-40 oils, providing improved lubrication to critical engine parts which reduces wear during cold temperature start-ups.
Wear Control	Provides improved wear control over previous performance classifications and exceeds the requirements of today's tests.
Exceptional Soot and Deposit Control	Demonstrated exceptional soot and deposit control that exceeds the requirements of new and older engines. This additional control reduces engine wear and extends engine life.
TBN Retention	A high Total Base Number (TBN) and excellent TBN retention means more combustion contaminants (deposits, soot, acids) can be neutralized during the course of a drain interval.
Volatility Control	Less oil volatility provides reduced consumption, lower deposits, and a reduced amount of oil in the emission system.
Extended Drain	Capable of extended drain service in new and older engines.



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Expect Superior Performance in:

- Four-stroke naturally aspirated and turbocharged diesel engines.
- All '07 and newer low emission engines with exhaust after treatments devices.
- Pre-2007 engines specifying older API or OEM oil performance categories.
- Using ultra low or low sulfur diesel fuel.
- When the manufacturer recommends the use of 5W-40 diesel engine oils.

TYPICAL PROPERTIES

SAE Grade	5W-40
API Service	CJ-4, CI-4 Plus, CI-4, CH-4, CG-4, CF-4, CF/SM
API Gravity/Density lbs/gal	33.9/7.12
Viscosity @ 40°C	cSt 89.2
Viscosity @ 100°C	cSt 14.8
Viscosity Index	170
Pour Point	-49°F (-45°C)
MRV-TP1, cP	45,000 @ -35°C
CCS Viscosity, cP	6,000 @ -30°C
Total Base No. (TBN)	10.3
Sulfated Ash Wt. %	1.0

The typical properties listed reflect the general characteristics of the product, and are not manufacturing specifications. Normal batch-to-batch variations should be expected.

Typical Application

DakotaSyn Full Synthetic 5W-40 CJ-4 is designed to exceed the newest API and OEM service categories:

Mack EO-O PP 07', EO-N PP 03', EO-M Plus, EO-M, Volvo VDS-4/3, Cummins 20081, Caterpillar ECF-3/2, Detroit Diesel 93K218/15/14, Mercedes Benz 228.31, Renault RLD-3, MAN M-3275, MTU type I/II, Global DHD-1, ACEA E9/E7, JASO DH-2

Typical Customer

Operators of heavy-duty diesel engines:

- Fleets, Contractors, Agriculture
- On and off highway engines operating in extreme temperatures.
- Diesel passenger cars and light trucks.

HEALTH AND SAFETY INFORMATION

For recommendations on safe handling and use of this product, please refer to the Material Safety Data Sheet.