PRINCE LUBRICANTS®

PRODUCT INFORMATION
& DATA SHEET

D1 GOLD SAE 5W-40 CK-4/SN

Our signature low SAPS, fully synthetic diesel heavy-duty engine oil, featuring P-12 Ester technology, helps extend engine life even under the most demanding operating conditions, including towing heavy loads, long hauling, frequent stop-and-go traffic, rough terrain, and in extremely low or high ambient temperatures. The P-12 Ester helps resist thermal-related deterioration better than competing fully synthetic diesel engine oils. The leading-edge additive system safeguards against wear damage and limits viscosity changes due to soot accumulation as well as minimizes shear stresses during prolonged use. Due to its high flash point and low volatility properties, this extended-life oil allows for extended drain intervals and supports sustained lubrication performance and overall engine cleanliness, especially the cylinder-piston zone. Surpassing the stringent API CK-4 standards, it provides exceptional anti-corrosion, anti-scuff, anti-wear, foam and aeration control, oxidation stability, and enhanced fuel efficiency. Low SAPS technology guarantees compatibility with all exhaust after-treatment systems (EGR, DPF, TWC, SCR) in the latest environment-conscious EURO VI turbodiesel engines.

Industry & Performance Levels

API CK-4/SN, ACEA E6/E8/E9/E11, Caterpillar ECF-3, Chrysler MS10902, Cummins CES 20081, Cummins CES 20086, Detroit Diesel DFS 93K222, Mack EOS-4.5, MB 228.31, MB 228.51, Renault RLD-4, Volvo VDS-4.5

Key Benefits

- P-9 Esters feature high compatibility with Group III base stocks and solubility with additives.
- Enhanced solvency, more effective at cleaning and preventing sludge and deposits buildup.
- Higher and stable viscosity index (VI) providing consistent lubrication at all temperatures.
- Exceptional shear stability maintains film strength and viscosity under mechanical stress.
- Excellent high-temperature stability and oxidation resistance ensuring longer oil life.
- Maintains excellent low-temperature properties, allowing superior flowability in winter.
- Low pour point properties protect turbocharger against oil starvation at subzero temperatures.
- Superb friction coefficient provides wear reduction and smoother operation at all driving modes.
- Superior lubrication, reducing friction and contributing to fuel efficiency and CO2 reduction.
- Low volatility (burn-off) rate minimizes evaporation loss and helps reduce oil consumption.
- Excellent to use with the latest turbocharging and direct injection gasoline engines.

Areas of Application

Developed for fuel-efficient, emission-conscious, turbocharged diesel engines in trucks, buses, vans, and off-highway working machines with advanced exhaust after-treatment systems (EGR, DPF, SCR) up to the latest EURO VI emission standards, for which the API CK-4 service categories are recommended. Ideally suitable for new generation and older diesel engines.

Service Recommendation

Follow the oil drain interval required by the respective manufacturers. Observe the owner's manual booklet. Recommend to flush before add in new oil. Change oil filter at time of oil change.

Commercially Available Product Compatibility

Our diesel engine oil is compatible with any synthetic and conventional engine oil. Maximum performance is assured only when used on its own, without being mixed with other oils.

Typical properties

SAE Viscosity		**5W-40**
Viscosity Index (VI)	ASTM D2270	177
Viscosity at 100 °C; mm²/s	ASTM D445	14.5
Viscosity at 40 °C; mm²/s	ASTM D445	87.3
Density at 15 °C; kg/m³	ASTM D4052	857.0
HTHS Viscosity at 150 °C; cP	ASTM D4683	> 3.5
CCS Viscosity at -30 °C; cP	ASTM D5293	< 6600
Flash Point; °C	ASTM D92	236
Pour Point; °C	ASTM D97	-45
Sulfated Ash; mass%	ASTM D874	0.96
Total Base Number; mgKOH/g	ASTM D2896	10.8

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