



PRODUCT INFORMATION & DATA SHEET

PRINCE® D1 SAE 15W-40

The Extraordinary Synthetic Diesel Engine Oils.

PRINCE® D1 is an all-season synthetic motor oil with lowered ash formulation developed for newer EURO 4 and 5 exhaust-optimized diesel engines to minimize after-treatment impact, extreme-load wear, fuel and oil consumption. The additive formulation of this excellent motor oil as well ensures complete anti-wear protection and operational reliability on high-mileage diesel engines.

D1 diesel engine oil is strengthened with an additive system that offers stable oxidation and thermal properties to prevent viscosity degradation and oil thickening. Fortified with boosted soot handling and dispersant agents to maintain long-lasting valves, piston-cylinder and turbo cleanliness, keep soot independently and prevents soot-causing wear.

This motor oil is designed to prevent the blocking of DPF and minimize the chance of operational failure of the Selective Catalytic Reduction (SCR) system for service life extension.

This motor oil meets or even exceeds the following list of OEM's approvals and standards:

API CI-4, API SL, ACEA E7, Cummins CES 20081, Daimler MB 228.31, DDC DFS 93K218, Deutz DQC III-10 LA, JASO Global DHD-1, MACK EO-O Premium Plus, MTU Type 2.1, Renault VI RLD-3, Volvo VDS-4

Some of the benefits of using this motor oil:

- A cost-efficient motor oil for mixed fleets applications in all on-highway and off-highway transportation including trucks, buses, farming tractors, construction machines and stationary.
- Cleaning agents that include detergent and dispersant additives work together fundamentally to maintain and improve engine cleanliness, eliminate and prevent the formation of contamination, deposits, varnish and sludge in crucial engine parts.
- Contains specially formulated additive technology to reduce and prevent wear, foaming, corrosion and rust on all engine parts to prolong engine lifespan.
- Excellent oxidation stability minimizes oil degradation and additive depletion, ensures maximum viscosity stay-in-grade within the designated interval.
- Excellent oil pumpability at sub-zero temperatures delivers easier starting up and reduces morning cold-start wear formation.
- High reserve and security even under marginal lubrication boundaries as well as working extremely for long hours.
- Low evaporation tendency and burn-off properties allowed lower oil consumption and maintain optimum oil pressure level.
- Outstanding friction modifiers have been added to ensure a proper coefficient during engine operations, thereby provide smoother power transmissions and reduce fuel consumption.
- Recommended for extended oil drain intervals in many modern turbodiesel engines recommended by the vehicle manufacturers.
- Suitable for applications in diesel engines with Exhaust gas recirculation (EGR) systems, Selective catalytic reduction (SCR), Diesel particulate filter (DPF) and Diesel oxidation catalyst (DOC).

Areas of application

Designed for use in newer generation exhaust gas-optimized and high mileage, EURO 2 to EURO 5 emission standards specified natural aspirated, common-rail injection and turbodiesel engines, with and without Exhaust gas recirculation (EGR) and after-treatment systems that require the viscosity grade of this motor oil. Applicable in gasoline and liquefied petroleum gas engines requiring an API SL motor oil. The current API specifications are fully backward compatible.

A cost-efficient motor oil that is ideally suitable for off-highway mixed fleet applications with severe low-speed and maximum working conditions in the farming, forestry and construction industries powered by any kinds of highly rated diesel fuels.

Typical properties

<u>SAE Viscosity</u>		<u>15W-40</u>
Viscosity Index (VI)	ASTM D2270	153
Viscosity at 100 °C; mm ² /s	ASTM D445	15.7
Viscosity at 40 °C; mm ² /s	ASTM D445	118.3
Density at 15 °C; kg/m ³	ASTM D4052	866.0
CCS Viscosity at -30 °C; mP*as	ASTM D5293	4850
Flash Point; °C	ASTM D92	232
Pour Point; °C	ASTM D97	-34
Total Base Number	ASTM D2896	10.8

Service recommendations

Follow the oil drain interval required by the respective manufacturers. Extended oil drain interval can be accomplished. Observe the owner's manual booklet. Change oil filter at time of oil change.

Commercially available product compatibility

Our synthetic motor oil is compatible and miscible with any fully synthetic, synthetic, and conventional motor oils. Peak performance is guaranteed only upon using alone without mixing with other motor oils. Mixing with any commercially available motor oils will affect the extended oil drain interval performance of this oil.

Our motor oil products are designed and developed with appropriate additive package. Hence, aftermarket oil additive products are not recommended for used alongside.

Product availability

This product may not be available locally. Contact your local distributor.

The information show herein is subject to change without noticed. The product indicated here have been developed by PRINCE LUBRICANTS for use in the areas of applications shown. We reserve all right to alter the characteristics and product properties to align with continually technical development.