



PRODUCT INFORMATION & DATA SHEET

PRINCE® FSe SAE 0W-20

The Modern-day Hybrid Fully Synthetic Motor Oil.

Unlike conventional internal combustion vehicles, a hybrid has more stringent demands placed on its engine and motor oil. The longer period of infrequent engine usage doesn't allow the oil to reach optimum operating temperature immediately to ensure comprehensive in-and-out protection. This can lead to serious problems such as corrosion, sludge and wear, as well as decreasing the car's fuel economy potential.

That's why we specifically designed a new line up of purpose-built low-viscosity hybrid motor oil: The FSe. This motor oil is strengthened with specially engineered Anti-Corrosion and Anti-Wear Boosters to form formidable shields and protect your hardworking hybrid and all engine counterparts, allowing maximum hybrid engine life, engine performance and operational efficiency. The composition of cutting-edge base oils and additive technology deliver the highest level of environmental protection, fuel-efficiency, combustion chamber, piston and valves cleanliness and moisture separation capabilities.

FSe SAE 0W-20 is formulated for hybrid engines with/without direct injection, turbocharger, soot particulate filter of American and Asian car makers. It is developed to comply with the demanding requirements of API SP Resource Conserving and ILSAC GF-6A standards, ensuring the optimal care and safeguard for all of the latest generation gasoline engine designs.

This motor oil meets the following industry specifications:

API SP Resource Conserving, API SN Plus, Chrysler MS-6395, Fiat 9.55535-CR1, Ford WSS-M2C947-A/WSS-M2C947-B1/WSS-M2C962-A1, GM dexos®1 Gen3, Honda HTO-06, ILSAC GF-6A

Some of the benefits of using this motor oil:

- A formulation of lowered HTHS-Viscosity delivers higher fuel saving performance in all hybrid engines.
- Contains special boosting active agents to prevent the caused of frictional wear damage on all moving metal parts.
- Compatible with modern after-treatment system and increase durability of Three-Way catalytic converter.
- Designed with exceptional sub-zero temperature viscosity control to excellently endure idling stop and ensure the fastest oil flow at each start up.
- Exceptional oxidation stability to minimize the degradation and dilution of oil even inactivity for a long time.
- Exceptional thermal resistant performance helps resist the build up of high-temperature deposits, sludge and varnish.
- Formulated with innovative additive that suspends water molecules in the oil to prevent damage from fuel and moisture.
- Formulated with dispersant and inhibitors to prevent condensation-caused corrosion and rust.
- Outstanding and rapid lubrication for powerful engine response in all driving modes, inc. acceleration for optimum drivability.
- Reliably prevents premature ignition at low-speed (LSPI) particularly in the latest direct injection engine.
- Turbocharger of the latest generation is well protected with limited deposits build-up and turbo coolant control capacities.

Areas of application

This motor oil has been developed initially for hybrid application. It is most appropriate for used in plug-in electric hybrid (PHEV), mild electric hybrid (MHEV), battery-assisted hybrid (BAHV), spark-ignition, direct injection, turbocharged and non-turbocharged gasoline engines of the latest generation, where the manufacturer called for viscosity grade of this motor oil.

This motor oil is applicable in non-hybrid gasoline engines. However, this motor oil is strictly not for application in diesel engines.

The ILSAC GF-6A standard is backward compatible with ILSAC GF-5, ILSAC GF-4 and ILSAC GF-3.

Typical properties

<u>SAE Viscosity</u>		<u>0W-20</u>
Viscosity Index (VI)	ASTM D2270	168
Viscosity at 100 °C; mm ² /s	ASTM D445	8.2
Viscosity at 40 °C; mm ² /s	ASTM D445	44.5
Density at 15 °C; kg/m ³	ASTM D4052	845.0
HTHS Viscosity at 150 °C; cP	ASTM D4683	2.4
Flash Point; °C	ASTM D92	234
Pour Point; °C	ASTM D97	-45

Service recommendations

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 fully synthetic motor oil is compatible with other fully synthetic, synthetic and/or conventional motor oils. Peak performance is guaranteed only upon using alone without mixing with other motor oils. 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.