

Fully Synthetic

K1 Lube GX SQ

Superior grade gasoline engine oil for Maximum performance

• API SQ-RC, ILSAC GF-7A



DESCRIPTION

The introduction of API SQ happens concurrently with the establishment of ILSAC GF-7 criteria, produced by the International Lubricants Standardization and Approval Committee. While API and ILSAC standards usually maintain close coordination—as seen with API SQ and GF-7—API SQ will specifically handle very low viscosity ranges excluded from GF-7's scope. Owners of vehicles using GF-6 and API SP oils can expect full compatibility when transitioning to either GF-7 or API SQ products.

APPLICATIONS

- Improved fuel economy by including ultra-low viscosity oils such as SAE 0W-8, 0W-12.
- Enhanced Engine Protection: improved engine protection performance including prevention of timing chain wear, prevention of low-speed pre-ignition (LSPI), and suppression of piston deposits.
- Reduced emissions: extends the life of gasoline particulate filters (GPFs) and reduces emissions by limiting SA (sulfated ash) to 0.9%.
- Enhanced suitability for hybrid vehicles.

PERFORMANCE STANDARDS

- API SQ-RC, ILSAC GF-7A

CUSTOMER BENEFITS

Timing Chain Wear Protection

Advanced additives protect timing chain against wear so that they may reduce power loss of engine and increase the life time of engine parts.

LSPI Prevention

Detergent additives containing magnesium efficiently restrain LSPI (Low Speed Pre-Ignition) that could damage T-GDI engines.

Enhanced Fuel Efficiency

Specifically designed anti friction additives minimize engine friction losses and improve fuel efficiency.

High Quality VHVI Base Stock

Superior low temperature properties of Group III base oil make the start-up of engines easy at low temperature. Excellent thermal stability and oxidation stability of VHVI base oil protect suppress oil degradation and sludge formation inside engine.

API SP -> API SQ UPGRADE

Test	API SP Spec.	API SQ Spec.	Changes
Sequence VIE (Fuel Economy: SAE 0W-20+)	Fuel economy improvement $\geq 0.5\%$	Fuel economy improvement $\geq 0.8\%$	-Enhanced test condition repeatability - Reduced tolerance range - Strengthened reference oil comparison
Sequence VIF (Fuel Economy: SAE 0W-16-)	Fuel economy improvement $\geq 0.7\%$	Fuel economy improvement $\geq 1.0\%$	
Sequence IX (LSPI Prevention)	LSPI occurrence ≤ 5 times	Same criteria, enhanced sensitivity	-Enhanced test sensitivity - Fuel: high octane, high LSPI sensitivity gasoline - High load, extended low RPM time - Shortened restart intervals
Sequence X (Timing Chain Wear)	Required for some grades only (e.g., GF-6B)	Mandatory for all viscosities	- Mandatory for all viscosity products - Stricter chain elongation limits
Chrysler Oxidation Test	Not applicable (optional)	Mandatory for all products Viscosity increase $\leq 100\%$	
Hybrid Engine Simulation Test	Not included	Fuel dilution $\leq 4\%$ Sludge rating ≥ 4.0	