



A HOLLYFRONTIER BUSINESS

TECH DATA

SUPREME™ HIGH MILEAGE

MULTIGRADE MOTOR OILS

INTRODUCTION

SUPREME™ HIGH MILEAGE Motor Oils are specifically designed to meet the needs of vehicles with higher mileage. Specially formulated to improve ring sealing in the piston-liner interface, reducing engine blow-by and helping to prevent added sludge deposits, these oils also contain REGEN Technology. REGEN Technology reduces sludge deposits that have been accumulating in the engine over time. Up to 40%* sludge clean-up is possible with just one oil change. Continuous use helps maintain engine cleanliness, which also supports a reduction in engine blow-by. This combination results in more power for the driver. SUPREME HIGH MILEAGE motor oils with REGEN Technology will pamper high mileage vehicles, protecting vital engine components and aiding performance as the miles add on.

SUPREME HIGH MILEAGE Motor Oils start with a pure advantage. They are formulated using Petro-Canada Lubricants base oils, which are among the purest base oils in the world. We use the HT Purity Process to remove performance-hindering impurities. Our base oils are 99.9% pure. That purity can help maximize the performance of our motor oils. In combination with leading edge REGEN Technology, which is specifically designed to clean up the engine and boost power lost from blow-by, they deliver an advanced oil for higher mileage engines.

SUPREME HIGH MILEAGE Motor Oils are formulated to exceed the latest API Service Classification for gasoline engines, API SP with Resource Conserving, as well the latest ILSAC GF-6A standard. Available in a full synthetic SAE 0W-20 viscosity grade and SAE 5W-20, 5W-30, 10W-30 viscosity grades which contain a blend of our high quality API Group II base oils and our higher quality API Group III synthetic base oils. There is a SUPREME HIGH MILEAGE motor oil to meet the needs of most gasoline fueled vehicles on the road today.

FEATURES AND BENEFITS

Extended Engine Life

- REGEN Technology significantly improves sludge clean-up
- Reduced engine blow-by improves power to the driver
- Outstanding protection against wear, rust and corrosion
- Bearing life greatly extended
- Minimizes wear due to stop-start driving
- Protects against low speed pre-ignition (LSPI) and accelerated timing-chain wear in GDI/TGDI engines

Exceptional Resistance to High Temperature Thermal Breakdown

- Cleaner running engines
- Reduces formation of varnish, sludge and carbon on engine parts
- Protects turbochargers from deposit formation
- Minimizes piston-ring sticking
- Improves lubrication because oil-ways stay clean

Outstanding Low Temperature Fluidity

- Permits easier unaided cold weather starts
- Reduces wear during low temperature start-up and operation

Reduced Oil Consumption

- Low evaporation loss results in less oil top-up
- Verified seal compatibility helps prevent leaks

Compatible with High Ethanol Fuels (up to E85)

- Protects against engine corrosion
- Prevents water separation

Protection of Exhaust Emission Control Systems

- Formulated to meet reduced phosphorus and sulphur levels, and to provide reduced phosphorus volatility in order to protect and extend the life of emission control systems

Petro-Canada Lubricants starts with the HT purity process to produce water-white, 99.9% pure base oils. The result is a range of lubricants, specialty fluids and greases that deliver maximum performance for our customers.

*Based on performance data obtained in Sequence V engine testing modified to evaluate sludge clean-up.



IMPROVED FUEL ECONOMY PERFORMANCE

SUPREME HIGH MILEAGE Motor Oils meet or exceed the ILSAC GF-6A requirements for fuel economy improvement and fuel economy retention, which surpass previous generation ILSAC GF-5 motor oils. They not only provide better initial fuel economy, but they excel at maintaining it over the oil drain interval.

APPLICATIONS

SUPREME HIGH MILEAGE Motor Oils are recommended for year-round use in all gasoline powered vehicles which require an ILSAC GF-6A or API SP fluid. SUPREME HIGH MILEAGE Motor Oils meet or exceed new car warranty requirements for North American and Asian vehicles where ILSAC GF-6A or API SP engine oils are recommended. They are fully back serviceable to previous ILSAC and API performance ratings including ILSAC GF-5 and API SN/SN PLUS. They include REGEN Technology which provides additional benefits for gasoline fueled vehicles with higher mileage.

SUPREME HIGH MILEAGE Motor Oils are fully compatible with all other synthetic and conventional motor oils. However, for best results and performance, we recommend a complete oil and filter change when switching to SUPREME HIGH MILEAGE oils.

Always consult owner's manual to select the appropriate viscosity grade and approval level.

SUPREME™ HIGH MILEAGE MOTOR OILS RECOMMENDED APPLICATIONS

■ Approved or Licensed □ Meets ● Suitable for Use

| SAE Viscosity Grade | 0W-20 | 5W-20 | 5W-30 | 10W-30 |
|--|-------|-------|-------|--------|
| API | | | | |
| SP | ■ | ■ | ■ | ■ |
| SP Resource Conserving | ■ | ■ | ■ | ■ |
| SN, SN Resource Conserving, SN PLUS* | □ | □ | □ | □ |
| ILSAC | | | | |
| GF-6A | ■ | ■ | ■ | ■ |
| GF-5* | □ | □ | □ | □ |
| Chrysler | | | | |
| MS-6395 | ● | ● | ● | ● |
| Ford | | | | |
| WSS-M2C960-A1 | | □ | | |
| WSS-M2C961-A1 | | | □ | |
| WSS-M2C962-A1 | □ | | | |
| Other OEMs | | | | |
| General Motors, Honda, Hyundai, Kia, Mazda, Toyota | □ | □ | □ | □ |

* back-serviceable

Always consult the owner's manual to select the appropriate viscosity grade and approval level for your engine.

TYPICAL PERFORMANCE DATA

| Property | ASTM TEST Method | SUPREME HIGH MILEAGE | | | |
|---|------------------|----------------------|----------------------|----------------------|----------------------|
| | | SAE 0W-20 | SAE 5W-20 | SAE 5W-30 | SAE 10W-30 |
| Density, kg/L @ 15°C | D4052 | 0.844 | 0.853 | 0.851 | 0.862 |
| Colour | D1500 | 2.5 | <3.0 | 2.5 | 2.5 |
| Flash Point, COC, °C / °F | D92 | 235 / 455 | 233 / 451 | 237 / 459 | 237 / 459 |
| Pour Point, °C / °F | D5950 | -45 / -49 | -45 / -49 | -42 / -44 | -42 / -44 |
| Kinematic Viscosity cSt @ 40°C cSt @ 100°C | D445 | 45.8 8.5 | 50.0 8.6 | 66.3 11.1 | 68.1 10.5 |
| Viscosity Index | D2270 | 166 | 150 | 161 | 141 |
| Cold Cranking Viscosity, cP @ °C / °F | D5293 | 5600 @ -35 / -31 | 5500 @ -30 / -22 | 5800 @ -30 / -22 | 5300 @ -25 / -13 |
| Borderline Pumping Viscosity, cP @ °C / °F | D4684 | 18000 @ -40 / -40 | 15000 @ -35 / -31 | 19000 @ -35 / -31 | 16000 @ -30 / -22 |
| Volatility (Noack), % loss | D5800 | 10.7 | 11.4 | 11.7 | 9.7 |
| Sulphated Ash, % wt. | D874 | 0.72 | 0.85 | 0.72 | 0.81 |
| Sulphur, mass % | D4294 | 0.28 | 0.28 | 0.28 | 0.28 |
| Phosphorus, mass % | D4951 | 0.08 | 0.08 | 0.08 | 0.08 |
| Base Number, (BN), mg KOH/g | D2896 | 7 | 7 | 7 | 7 |
| High-Temperature High-Shear (HTHS) Viscosity, cP @ 150°C and 1E+06/s | D4683 | 2.7 | 2.7 | 3.2 | 3.1 |

The values quoted above are typical of normal production. They do not constitute a specification.

Learn more about us: lubricants.petro-canada.com
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Committed to the disciplined operation of our business.



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