SINCE 1839
Schaeffer's
SPECIALIZED LUBRICANTS

TECHNICAL DATA

102 Barton Street, St. Louis MO 63104
Ph: 800-325-9962 / Fax: 314-865-4107
www.schaefferoil.com
ISO 9001 CERTIFIED

701 SUPREME 7000 SYNTHETIC PLUS SAE 5W-30
703 SUPREME 7000 SYNTHETIC PLUS SAE 10W-30

Supreme 7000 Synthetic Plus gasoline engine oils are a premium quality multi-grade para-synthetic engine oils that are specifically formulated to protect critical engine parts from damaging friction and wear, provide enhanced protection against the formation of sludge and deposits, provide increased engine efficiency and fuel economy benefits and extend engine life in all gasoline fueled automobile and light duty truck engines including those that are turbocharged and supercharged.

Supreme 7000 Synthetic Plus gasoline engine oils are blended from a unique combination of the finest quality severely hydro-treated polyalphaolefin (PAO) synthetic based fluids and solvent refined, and severely raffinate hydro-converted Group II Plus available. This unique combination provides Supreme 7000 Synthetic Plus gasoline engine oils with the following advantages:

- **Superior Cold Weather Startability and Operating Characteristics -** This results in less friction and lubricant drag in the engine and instant lubrication during cold weather start up.
- **Superior Oxidative Stability -** Any oil as it is increasingly exposed to high temperature operation undergoes the process of oxidation. This results in the oils thickening and the buildup of acidic components. Because of the PAO's and the Group II+ base oil's uniform molecular structure, the process of oxidation is greatly reduced.
- **Excellent Resistance to Thermal Degradation**
- **Lower Volatility -** This results in reduced oil consumption and a reduction in emissions
- **Lower Engine Oil Pumpability at Low Temperature -**This ensures the Supreme 7000 Synthetic Plus gasoline engine oils will pump rapidly and be distributed rapidly at low temperatures, thus providing the optimum protection it needs at low temperature startup
- **A High Viscosity Index -** This results in minimum change in viscosity. The adequate viscosity for the proper lubrication of the engine is provided regardless of temperature..
- **Excellent Film Strength -** This results in increased protection against wear
- **Compatibility with All Types of Seals**
- **Extended Oil Drain Capability and Intervals**

Blended into the synthetic blend base stocks is a highly advanced proprietary performance additive package and a highly shear stable viscosity index improver. This combination provides the Supreme 7000 Synthetic Plus gasoline engine oils with the following performance benefits:

- A patented novel zinc anti-wear additive system that minimizes volatility and chemical breakdown of the zinc anti-wear additive in order to provide maximum and long lasting anti-wear performance and robustness needed to protect the engine
- Further engine protection, mitigating LSPI events
- Superior protection against timing chain wear
- Outstanding protection against the formation of high temperature deposits
- High detergency and dispersancy to suppress the formation of deposits, sludge and varnish
- Active cleaning agents for increased and enhanced engine cleanliness
- Exceptional protection against the formation of coking deposits on turbochargers
- Exceptional protection against thermal breakdown during high engine oil operating temperature conditions
- Rapid circulation and excellent pumpability

- Excellent low temperature flow characteristics and pumpability to provide rapid circulation and minimize wear during start-up
- Excellent resistance to thinning at high temperatures
- Excellent shear stability to resist viscosity shear down and breakdown
- Excellent high temperature/high shear performance to provide excellent oil film thickness and engine protection at high operating temperatures and shear rates, while minimizing lubricant frictional resistance
- Enhanced lubrication to maintain maximum horsepower and acceleration
- Hydro-Ethanol inhibitors that significantly reduce the problems that can result from the use of ethanol blended fuels
- Substantially reduced oil consumption
- Extra protection for hot running engines
- Extra protection for cold running engines in stop-and-go service.
- Reduced oil ageing allowing for increased drain intervals
- A substantial reduction in ring and cylinder wear
- Reduced bearing wear and increased bearing life
- Excellent rust and bearing corrosion protection
- Enhanced vehicle emissions control system compatibility
- Extended vehicle emissions control system life
- Increased fuel economy benefits and retention for improved gas mileage during the oil's entire oil drain interval
- Superior valve train-wear protection
- Increased engine life
- Excellent anti-foaming properties

Further blended into these synthetic blend base fluids, the highly advanced proprietary performance additive package and shear stability viscosity index improver are two proven frictional modifiers, Micron Moly®, a liquid soluble type of Moly and Schaeffer Mfg's own proprietary additive Penetro® . These two proven frictional modifiers once plated, form a long lasting slippery tenacious lubricant film, which prevents the metal surfaces from coming into contact with each other. By preventing metal-to-metal contact, damaging frictional wear is prevented from occurring. This prevention of metal-to-metal contact and reduction in wear results in:

- **Increased fuel economy**
- **A low coefficient of friction**
- **Significantly less bearing, ring, piston, cylinder and valve-train wear**
- **Increased engine efficiency**
- **Increased engine durability**
- **Less down-time**
- **Reduced maintenance costs**

Supreme 7000 Synthetic Plus gasoline engine oils meet and exceed the following specifications and manufacturers' requirements: MIL-PRF-46152E, CID A-A-52039B, API Service Classification SN PLUS, Resource Conserving, ILSAC GF-5, Ford WSS-M2C909-A1 (5W-30), Ford WSS-M2E909-A2 (10W-30), Ford WSS-M2C946-A (5W-30), Ford WSS-M2C946-B1(5W-30), Ford WSS-M2C929-A(5W-30), General Motors 6094M, Chrysler MS-6395, Chrysler MS-9214.

TYPICAL PROPERTIES

SAE Grade	**5W-30 (701)**	**10W-30 (703)**
Specific Gravity 60°F (15.6°C)	0.87	0.87
Viscosity @ 40°C, cSt. (ASTM D445)	47-52	62.00-72.00
Viscosity @ 100°C, cSt. (ASTM D445)	10.00-12.00	10.00-12.00
HTHS Viscosity 302°F (150°C), cP (ASTM D4683)	3.16	3.27
Cold Cranking Viscosity @-30°C, cP (ASTM D5293)	6,500	------
Cold Cranking Viscosity @-25°C, cP (ASTM D5293)	------	4,755
Mini Rotary Viscosity TP1, cP @-35°C (ASTM D4684)	22,400	------
Mini Rotary Viscosity TP-1, cP @-30°C (ASTM D4684)	------	14,000
Viscosity Index (ASTM D2270)	155	147
Flash Point °F (°C) (ASTM D92)	448° (231°)	444° (229°)
Pour Point °F (°C) (ASTM D97)	-39° (-38°)	-39° (-38°)
Total Base Number (ASTM D2896)	7 TO 7.5	7 TO 7.5
Sulfated Ash Content % wt (ASTM D874)	0.84%	0.84%
NOACK Volatility %Evaporation Loss (ASTM D5800)	10.53%	9.4%
Foam Test (ASTM D892)		
Sequence I	0/0	0/0
Sequence II	0/0	0/0
Sequence III	0/0	0/0
Sequence IV	0/0	0/0
High Temperature Foam Test (ASTM D6082 Option A)	0/0	0/0
MHT-4 TEOST (ASTM D7097)		
Deposit Weight, mg	10	10
TEOST 33C (ASTM D6335)		
Deposit Weight, mg	12.4	12.4
Engine Rusting Ball and Rust Test (ASTM D6557)		
Average Gray Value	133	133
Sequence IIIG		
% Viscosity increase @ 40°C	130%	130%
Average Cam & Lifter Wear, µm	9.8	9.8
% Phosphorous (ASTM D4951)	0.076	0.076