# Passenger Car Engine Oil

HIGH PERFORMANCE LUBRICANTS
MANTENO, IL

## PRODUCT DESCRIPTION

High Performance Lubricants' passenger car engine oil is a multi-synthetic high performance motor oil made with the best choices of additive chemistry. Oils formulated with specifically chosen esters can help to minimize intake valve deposits, maintain clean engines and provide elastomer compatibility. The correct detergent selection combined with base stocks that have low volatility will combat low speed pre-ignition (LSPI) making it a perfect oil for gasoline direct injected (GDI) engines and small displacement turbocharged gasoline engines. HPL PCMO is also formulated with extra anti-wear and antioxidant additives to minimize wear while offering an extended oil life compared to other motor oils. Additionally, HPL PCMO contains premium viscosity index improvers (VII) to minimize shear, further extending the life of the oil. This technology has been proven on the race tracks around the nation. Our Bad Ass Racing oils have common additive strategy when compared to this PCMO formulation and have been extremely successful winning multiple championships in many forms of professional motor-sports. These oils are not something you will find on the shelf of a discount retailer. If you are a person looking for a product that will outperform traditional mineral and synthetic oils our products will be a perfect fit for you.

## FEATURES

- Excellent wear protection and superior high temperature stability
- Formulated to help eliminate LSPI
- Excellent for GDI engines
- Helps minimize intake valve deposits
- Compatible with conventional and synthetic oils
- Good low temperature performance
- Compatible with conventional and synthetic oils
- Low Coefficient of friction
- Meets or Exceeds:
  - API SP Resource Conserving (5W-20, 5W-30, 10W-30)
  - API SP (10W-40, 15W-40, 20W-50, 30, 40)
  - dexos1™ Gen2 (5W-20, 5W-30)
  - ILSAC GF-6A (5W-20, 5W-30, 10W-30)
  - Chrysler MS6395 (5W-20, 5W-30, 10W-30)
  - Ford WSS-M2C945-B1 (5W-20)
  - Ford WSS-M2C946-B1 (5W-30)

3 time NHRA Pro Stock World Champion Erica Enders

# Passenger Car Engine Oil
# Typical Properties

| | Method | SAE 5W-20 | SAE 5W-30 | SAE 5W-40 | SAE 10W-20 | SAE 10W-30 | SAE 10W-40 |
|---|---|---|---|---|---|---|---|
| **Viscosity** | | | | | | | |
| **cSt@40°C** | ASTM D445 | 51.51 | 64.18 | 91.3 | 56.24 | 68.71 | 98.78 |
| **cSt@100°C** | ASTM D445 | 8.80 | 10.72 | 14.82 | 8.62 | 10.28 | 14.36 |
| **Viscosity Index** | ASTM D2270 | 150 | 158 | 170 | 128 | 135 | 150 |
| **Cold Crank Simulator (cP)** | ASTM D5293 | 5,998@-30C | 6,363@-30C | 6,453@-30C | 6,188@-25C | 6,619@-25C | 6,784@-25C |
| **Base Number (BN), mg KOH/g** | ASTM D2896 | >13.5 | >13.5 | >13.5 | >13.5 | >13.5 | >13.5 |
| **Flash Point (°C/°F)** | ASTM D92 | 214/417 | 217/423 | 221/430 | 233/451 | 231/448 | 228/442 |
| **Foaming Tendency - Sequence II** | ASTM D892 | 0/0/0 | 0/0/0 | 0/0/0 | 0/0/0 | 0/0/0 | 0/0/0 |
| **Specific Gravity** | ASTM D1298 | 0.870 | 0.868 | 0.870 | 0.878 | 0.879 | 0.878 |
| **Rust Prevention** | ASTM D665 | Pass | Pass | Pass | Pass | Pass | Pass |
| **Copper Corrosion Prev. 3hr/24hr** | ASTM D130 | 1a / 1a | 1a / 1a | 1a / 1a | 1a / 1a | 1a / 1a | 1a / 1a |
| **Pour Point (°C/°F)** | ASTM D97 | -40/-40 | -41/-42 | -41/-42 | -41/-42 | -40/-40 | -40/-40 |
| **High Temp High Shear Visc, cP** | ASTM D5481 | 2.734 | 3.257 | 4.248 | 2.861 | 3.178 | 4.062 |
| **MRV Viscosity, cP** | ASTM D4684 | 16,675@-35C | 18,480@-35C | 21,626@-35C | 15,127@-30C | 17,175@-30C | 19,099@-30C |

| | Method | SAE 10W-50 | SAE 15W-40 | SAE 20W-50 | SAE 30 | SAE 40 |
|---|---|---|---|---|---|---|
| **Viscosity** | | | | | | |
| **cSt@40°C** | ASTM D445 | 135.1 | 109.0 | 186.2 | 74.8 | 123.3 |
| **cSt@100°C** | ASTM D445 | 19.27 | 14.36 | 20.11 | 10.33 | 14.38 |
| **Viscosity Index** | ASTM D2270 | 163 | 134 | 125 | 122 | 117 |
| **Cold Crank Simulator** | ASTM D5293 | 6,776@-25C | 6,268@-20C | 9,172@-15C | - | - |
| **Base Number (BN), mg KOH/g** | ASTM D2896 | >13.5 | >13.5 | >13.5 | >13.5 | >13.5 |
| **Flash Point (°C/°F)** | ASTM D92 | 224/435 | 234/453 | 236/457 | 235/455 | 239/462 |
| **Foaming Tendency - Sequence II** | ASTM D892 | 0/0/0 | 0/0/0 | 0/0/0 | 0/0/0 | 0/0/0 |
| **Specific Gravity** | ASTM D1298 | 0.876 | 0.883 | 0.890 | 0.882 | 0.889 |
| **Rust Prevention** | ASTM D665 | Pass | Pass | Pass | Pass | Pass |
| **Copper Corrosion Prev. 3hr/24hr** | ASTM D130 | 1a / 1a | 1a / 1a | 1a / 1a | 1a / 1a | 1a / 1a |
| **Pour Point, (°C/°F)** | ASTM D97 | -40/-40 | -40/-40 | -49/-56 | -43/-45 | -49/-56 |
| **High Temp High Shear Visc, cP** | ASTM D5481 | 5.072 | 4.213 | 5.468 | 3.161 | 4.236 |
| **MRV Viscosity, cP** | ASTM D4684 | 22,902@-30C | 16,037@-25C | 23,417@-20C | - | - |

NOTE: Properties above are not a specification, they are typical and may vary.

Revised 07.21.2021