



LUBRICANTS

## Shield<sup>TM</sup> Defense

Phillips 66® Shield Defense Synthetic Blend Motor Oil is a premium quality, part-synthetic automotive engine oil specially designed for use in gasoline-fueled vehicles with more than 75,000 miles. It also is recommended for use in lower-mileage vehicles, including new cars under warranty.

Shield Defense Motor Oil is formulated with a blend of synthetic and conventional base stocks and a proprietary seal conditioner. The part-synthetic formulation provides enhanced protection against viscosity breakdown and the formation of sludge and varnish compared with conventional engine oils. Our proprietary SealMax seal conditioner helps recondition and revitalize engine seals, thereby helping to reduce oil consumption, minimize driveway leaks and reduce exhaust smoke. These performance benefits help to maximize engine performance and extend engine life in high-mileage vehicles, while also providing excellent engine protection in newer vehicles.

Shield Defense Motor Oil meets new car warranty requirements as defined by ILSAC GF-5. It meets "Resource Conserving" requirements for fuel economy improvement, emission system and turbocharger protection, and protection of vehicles operating on ethanol-containing fuels up to E85. It is backward serviceable for use where API SM or earlier "S" category engine oils are recommended.

### Applications

- Gasoline-fueled and flex-fuel passenger cars, light trucks and sport utility vehicles, especially those with more than 75,000 miles

Shield Defense Motor Oil is licensed for:

- ILSAC GF-5
- API Service SN with Resource Conserving

Shield Defense Motor Oil meets or exceeds the requirements of:

- Chrysler MS-6395 (Rev. T)
- Ford WSS-M2C945-A (SAE 5W-20)
- Ford WSS-M2C946-A (SAE 5W-30)
- GM6094M (obsolete specification)

**Synthetic Blend  
Passenger Car  
Engine Oil for  
High Mileage  
Vehicles;  
Formulated with  
SealMax®**

KEEPING THE  
WORLD  
RUNNING  
SMOOTHLY. 



## Features/Benefits

- Meets ILSAC GF-5 requirements for new cars under warranty
- Part-synthetic formulation provides enhanced protection against deposit formation and oil thickening, compared with conventional engine oils
- Proprietary SealMax® seal conditioner helps recondition and revitalize engine seals to reduce oil consumption and leaks
- Protects against rust and bearing corrosion
- Low volatility for reduced oil consumption
- Excellent low-temperature pumpability for protection during cold starts
- Highly resistant to foaming
- Helps maximize engine performance and minimize exhaust smoke
- Formulated to protect turbochargers and emissions control system catalysts
- Formulated for use in vehicles operating on ethanol-containing fuels up to E85

## Shield Defense™

Typical Properties			
SAE Grade	5W-20	5W-30	10W-30
Specific Gravity @ 60°F	0.863	0.861	0.867
Density, lbs/gal @ 60°F	7.18	7.17	7.22
Color, ASTM D1500	3.0	3.0	3.0
Flash Point (COC), °C (°F)	218 (424)	216 (421)	229 (444)
Pour Point, °C (°F)	-39 (-38)	-39 (-38)	-39 (-38)
Viscosity, Kinematic			
cSt @ 40°C	49.9	67.0	65.7
cSt @ 100°C	8.6	10.8	10.5
Viscosity Index	150	152	148
Cold Cranking Viscosity, cP	6,150	6,150	4,550
@ (°C)	(-30)	(-30)	(-25)
High-Temp/High-Shear Viscosity, cP @ 150°C	2.6	3.1	3.0
Sulfated Ash, ASTM D874, wt %	0.96	0.96	0.96
Total Base Number (TBN), ASTM D2896	8.0	8.0	8.0
Phosphorus, wt %	0.077	0.077	0.077
Zinc, wt %	0.085	0.085	0.085

## Health Safety Information

For recommendations on safe handling and use of this product, please refer to the Material Safety Data Sheet via <http://3apps.phillips66.com/NetMSDS>.