



Warren® GEO Premium Low Ash Oil

Warren GEO Premium Low Ash Oils are natural gas engine lubricants formulated with a balanced and field-proven low ash additive system. They provide excellent deposit, sludge and wear protection during high stress service. The base stocks and additive package provide excellent dispersancy and high temperature detergency to reduce deposit formation due to nitration and to ensure minimal carbon and ash deposits during service. **Warren GEO Premium Low Ash Oils** TBN retention helps fight the formation of organic acids in the crankcase.

Warren GEO Premium Low Ash Oils are formulated with high quality hydrocracked base stocks, combined with a premium additive package containing ashless dispersant, oxidation and corrosion inhibitors, antifoam and antiwear agents. They are suitable for use in engines burning gaseous fuels such as clean natural gas, sour gas, sewer gas, well-head gas, methane, ethane and others. These oils meet the performance requirements of major engine manufacturers such as Caterpillar, Deutz-MWM, Guascor, Jenbacher, Wartsila, Waukesha and other turbocharged, naturally aspirated low ash four stroke engines. They also meet Caterpillar's G3500 and G3600 Series engine performance field test protocol.

Benefits

- Maximize engine run time
- High resistance to nitration and oxidation
- Outstanding engine cleanliness
- Reduced carbon formation results in less spark plug fouling



Warren Oil Company, LLC

Dunn, NC 28334; Benton, AL 36758; San Antonio, TX 78210;
Marion, IL 62959; Johnstown, PA 15909; West Memphis, AR 72301



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Typical Characteristics:

	Warren GEO Premium Low Ash Oil		
SAE Viscosity	30	40	15W-40
@40 °C, cSt	100	140	120
@100 °C, cSt	11.5	14.2	15.6
Viscosity Index	101	99	137
API Gravity	29	28.3	30.5
Sp. Gravity	0.882	0.886	0.868
Flash, COC, °F (°C)	495 (257)	500 (260)	450 (232)
Pour Pt., °F (°C)	-22 (-30)	-32 (-36)	-38 (-39)
Sulfated Ash	0.54	0.54	0.54
Zinc, ppm	325	325	325
Phosphorus, ppm	300	300	300
TBN, ASTM D2896	6.7	6.7	6.7
Bulk Product Code #	512200	514400	513300



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