



CITGO[®] Pacemaker[®] Gas Engine Oil 1940 XL

OVERVIEW



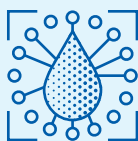
- Next-generation, premium-performance low ash and low phosphorus lubricant for stoichiometric and lean-burn stationary natural gas engines. Designed for highly loaded 4-cycle natural gas engines operating under severe conditions.
- Provides premium performance versus older technology lubricants in the high-nitration conditions typically found in stoichiometric engine operation.
- Meets rigorous demands of modern natural gas engines operating in a variety of natural gas fuel qualities.

FEATURES & BENEFITS



- Exceptional resistance to oxidation and nitration.
- Extended oil drain interval capability, up to twice the intervals of other premium oils operating in severe conditions. Reduced downtime and lubrication cost help maximize production and lower operating cost.
- Exceptional deposit control and protection against piston scuffing and ring and liner wear.
- TBN retention to neutralize combustion acids from sour gas.
- Minimized valve recession for longer head life.
- Improved TAN control.
- Catalyst-compatible.

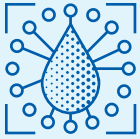
APPLICATIONS



Recommended for high- and medium-speed 4-cycle engines manufactured by:

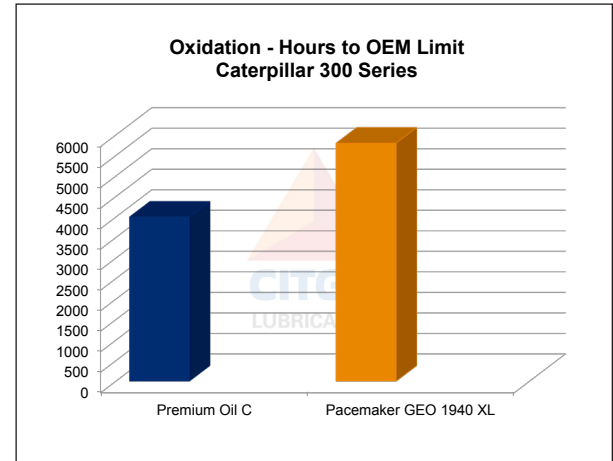
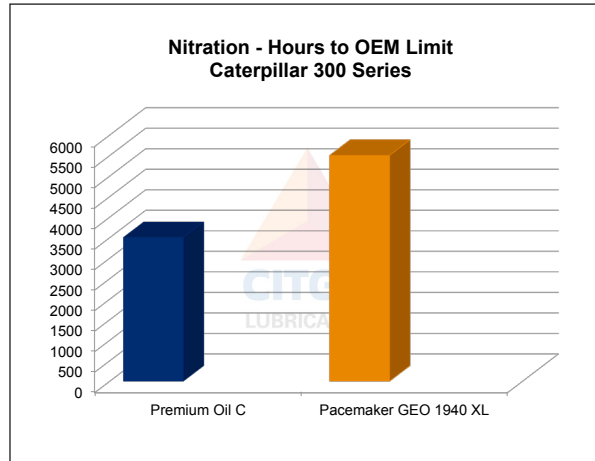
- Caterpillar
 - Waukesha
 - Superior
 - Jenbacher
 - Wärtsilä
 - Worthington (low-speed engines)
 - Cooper-Bessemer (low-speed engines)
 - Cummins
 - Dresser-Rand (Categories I, II, III)
- Endorsed by Caterpillar for use in CAT MaK G16CM34.

APPLICATIONS

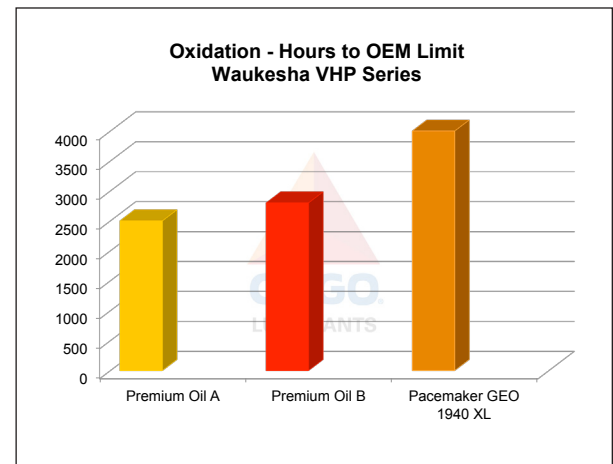
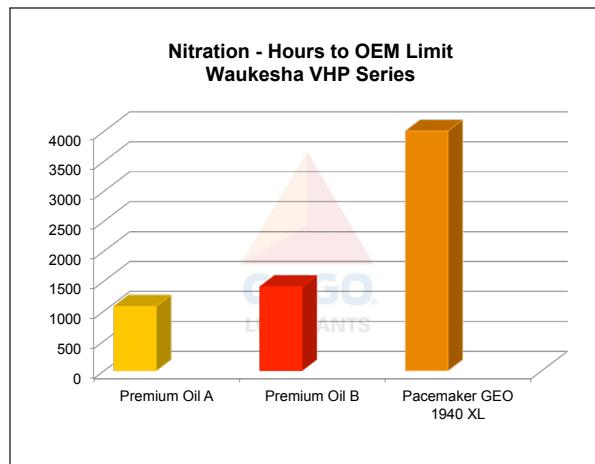


Proven in Severe Service

Caterpillar 300 Series and Waukesha VHP Series stoichiometric engines are historically severe in nitration. In field operation, results show CITGO Pacemaker GEO 1940 XL delivered up to 200% longer engine oil life compared to other premium oils.

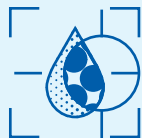


Caterpillar 300 Series Stoichiometric Engines



Waukesha VHP Series Stoichiometric Engines

PROPERTIES



Typical Properties for CITGO Pacemaker Gas Engine Oil 1940 XL:

Product Name	1940 XL
SAE Grade	40
Material Code	632085001
Gravity, ASTM D4052, °API	28.5
Pounds Per Gallon	7.37
Viscosity ASTM D445	
cSt at 40°C	126.7
cSt at 100°C	13.6
Viscosity Index, ASTM D2270	103
Pour Point, ASTM D97, °F (°C)	-33 (-36)
Color, ASTM D1500	L5.0
Sulfated Ash, ASTM D874, m%	0.5
Total Base No., ASTM D2896, mg KOH/g	5.09
Total Acid No., ASTM D664, mg KOH/g	0.82
Phosphorus, ppm	280

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