



CITGO[®] Pacemaker[®] Gas Engine Oil 1000 Series

OVERVIEW



- Premium quality, ashless stationary natural gas engine oils fortified with a latest-generation dispersant additive package in combination with corrosion, oxidation, and foam inhibitors, and a premium antiwear additive package.
- 1000 Series has a history of outstanding performance in gas processing, gas transmission, and other applications calling for a high-quality, ashless natural gas engine oil.
- Available in a single viscosity grade at the midpoint between SAE 30 and SAE 40 grades, SAE 40, and SAE 15W-40

FEATURES & BENEFITS



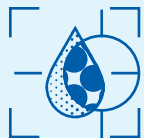
- Use of high viscosity index base stocks with low carbon residue minimizes carbon and varnish formation and maximizes oil oxidation life.
- Contain no bright stock.
- Provide superior protection against ring belt and port deposits in 2-cycle engines.
- Ashless formulation provides maximum protection against spark plug fouling.
- Ashless dispersant system provides excellent cleaning action to keep piston rings free in their grooves, extending overhaul periods and engine life.
- Excellent resistance to oil nitration and oxidation.
- Promote lower oil consumption, fewer deposits, and reduced maintenance costs.
- Provide superior corrosion protection to vital engine and compressor components.

APPLICATIONS



- Recommended for naturally aspirated and turbocharged 2-cycle stationary natural gas engines.
- CITGO Pacemaker Gas Engine Oil 1035 and 1040 are specially formulated to provide enhanced low temperature properties. Excellent performance where low temperature fluidity is needed but a monograde viscosity is preferred.
- Recommended for use in two-stroke engines such as Ajax, Clark, Dresser-Rand, Cooper-Bessemer, Worthington, and Fairbanks-Morse, as well as other gas engine manufacturers requiring ashless engine oils.
- Can be used in compressor cylinder lubrication.
- Consult equipment manufacturer for proper lubricant selection.

PROPERTIES



Typical Properties for CITGO Pacemaker Gas Engine Oil 1000 Series:

Product Name	1015	1035	1040
SAE Grade	15W-40	30/40	40
Material Code	632210001	632032001	632057001
Gravity, ASTM D4052, °API	31.6	30.8	30.8
Pounds Per Gallon	7.23	7.26	7.26
Flash Point, COC, ASTM D92, °F (°C), Min.	457 (236)	460 (238)	522 (272)
Viscosity ASTM D445			
cSt at 40°C	106	113	113
cSt at 100°C	13.9	12.9	13.5
Viscosity Index, ASTM D2270	129	107	108
Pour Point, ASTM D97, °F (°C)	-38 (-39)	-27 (-33)	-27(-33)
Color, ASTM D1500	L1.0	L1.0	L1.0
Total Acid No., ASTM D664, mg KOH/g	0.5	0.5	0.5
Total Base No., ASTM D2896, mg KOH/g	1.0	1.0	1.0
Oxidation Inhibitor	Yes	Yes	Yes
Corrosion Inhibitor	Yes	Yes	Yes
Dispersant	Yes	Yes	Yes
Antiscuff/Antiwear	Yes	Yes	Yes

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