

CITGO PACEMAKER® GAS ENGINE OIL
1000 SERIES



Date 04/15

DESCRIPTION: CITGO Pacemaker Gas Engine Oil 1000 Series oils are ashless gas engine lubricants fortified with an ashless dispersant, corrosion inhibitor, oxidation inhibitor and antiwear additive package. They are available in a single viscosity grade at the midpoint between SAE 30 and SAE 40 grades and an SAE 15W-40 grade.

- QUALITIES:**
- Use of high viscosity index base stock with low carbon residue minimizes carbon and varnish formation and maximizes oil oxidation life.
 - Contain no bright stock.
 - Ashless formulation provides maximum protection against spark plug fouling.
 - Ashless dispersant system provides excellent cleaning action which keeps piston rings free in their grooves, thereby extending overhaul periods and engine life.
 - Excellent resistance to oil oxidation.
 - Superior corrosion protection to vital engine and compressor components.
 - For use in compressor cylinder lubrication.
 - Provide superior protection against ring belt and port deposits in 2-cycle engine designs.

APPLICATIONS: CITGO Pacemaker Gas Engine Oil 1000 Series oils are applicable for use in a wide variety of 2- and 4-cycle gas engine designs. They meet the performance requirements for Dresser-Rand Categories I and II, as well as requirements for other leading gas engine manufacturers requiring ashless type engine oils.

CITGO Pacemaker Gas Engine Oil 1035LP is specially formulated to provide enhanced low temperature properties. This low pour point product provides excellent cold temperature flow properties and is well suited where low temperature fluidity is needed but a monograde viscosity is preferred.

The CITGO Pacemaker Gas Engine Oil 1000 Series has a history of outstanding performance in gas processing, gas transmission and other applications calling for a high quality ashless gas engine oil.

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Date 04/15 - (Continued)

TYPICAL PROPERTIES:

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Product Name	1015	1035	1035LP
SAE Grade	15W-40	30/40	30/40
Material Code	632210001	632032001	632031001
Gravity, ASTM D 4052, °API	31.0	29.8	29.2
Pounds Per Gallon	7.25	7.31	7.33
Flash Point, COC, ASTM D 92, °F (°C), Min.	471 (244)	543 (284)	460 (238)
Fire Point, COC, ASTM D 92, °F (°C), Min.	514 (268)	563 (295)	563 (295)
Viscosity, ASTM D 445, cSt at 40°C	99.9	121.2	114.5
cSt at 100°C	13.8	12.9	12.6
Viscosity Index, ASTM D 2270	139	99	102
Pour Point, ASTM D 97, °F (°C)	-22 (-30)	+10 (-12)	-27 (-33)
Color, ASTM D 1500	L2.0	L2.0	L1.5
Carbon Residue, % (base stock)	0.02	0.02	0.02
Total Acid No., ASTM D 664, mg KOH/g	0.51	0.43	0.2
Total Base No., ASTM D 2896, mg KOH/g	1.0	1.0	1.0
Phosphorus, ppm	400	400	400
Antiwear	Yes	Yes	Yes
Corrosion Inhibitor	Yes	Yes	Yes
Dispersant	Yes	Yes	Yes
Foam Suppressor	Yes	Yes	Yes
Oxidation Inhibitor	Yes	Yes	Yes