

CITGO PACEMAKER® T OILS



Date 03/18

DESCRIPTION: CITGO Pacemaker T Oils are extra inhibited high quality lubricants designed specifically as turbine oils.

QUALITIES: These oils are made from high viscosity index paraffinic base stocks that are processed by modern hydrotreating methods. Their high viscosity index imparts superior temperature-viscosity characteristics. Long service life in closed circulating systems is assured by the high flash point and excellent resistance to oxidation, rusting, and foaming.

Each grade of CITGO Pacemaker T Oil passes both procedures of the ASTM D665 Rust Test and will provide extended oxidation life as measured in the ASTM D943 Oxidation Test.

APPLICATIONS: CITGO Pacemaker T Oils in proper viscosity grade are recommended for pressure-circulation systems of direct-connected steam turbines and for the bearings of turbo-generators.

They are also recommended for the lubrication of steam turbines with single-reduction gear units, as found in marine service.

CITGO Pacemaker T Oils are suitable for the lubrication of industrial gas turbines and gear units.

CITGO Pacemaker T Oils are also highly recommended for use in compressor equipment, air lines, circulating oil systems, and gears where an R&O (Rust and Oxidation inhibited) type oil is specified.

Pacemaker T-32 meets the performance recommendations of:

- General Electric GEK 32568 H
- Fives Cincinnati P-38 (Grade T-32)
- ALSTOM HTGD 90117
- ASTM D4304 Type I, II, III
- British Standard BS 489
- DIN 51515 Part 1, 2
- DIN 51524 Part 1
- ISO 8068 TSA TGA, TGE TSE
- ISO 11158 HH, HL
- SIEMENS AG TLV 9013 04 Standard Thermal Stability
- SIEMENS AG TLV 9013 05 High Thermal Stability
- Solar ES9-244L grades C32 (150), C46 (5-215) (Grades T-32, T-46) respectively

Pacemaker T-68 is suitable for mist applications as evidenced by the Alemite test.

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TYPICAL PROPERTIES:

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Grade	T-32	T-46	T-68	T-115
Material Code	633715001	633720001	633730001	633745001
Gravity, ASTM D4052, °API	32.7	31.4	30.9	29.0
Pounds Per Gallon	7.18	7.24	7.26	7.34
Flash Point, COC, ASTM D92, °F (°C)	442 (228)	446 (230)	489 (254)	536 (280)
Viscosity, ASTM D445, cSt at 40°C	32.0	44.7	66.7	109
cSt at 100°C	5.5	6.8	8.8	12.2
Viscosity Index, ASTM D2270	107	104	105	102
Pour Point, ASTM D97, °F (°C)	-38 (-39)	-38 (-39)	-38 (-39)	0 (-18)
Color, ASTM D1500	L1.0	L1.0	L1.5	1.5
Foam Test, ASTM D892 ⁽¹⁾ , Seq. I, II, III	Pass	Pass	Pass	Pass
Aniline Point, ASTM D611, °F (°C)	219 (104)	223 (106)	230 (110)	244 (118)
Neutralization No., ASTM D664	0.1	0.1	0.1	0.1
Corrosion, ASTM D130, 3 hours at 212°F	1 B	1 B	1 B	1 B
Oxidation, ASTM D943 ⁽²⁾ , hours	10,000 +	10,000 +	—	—
Water Separation, Dist. Water, ASTM D1401, at 130°F (54°C)	40-40-0 (15)	40-40-0 (15)	40-40-0 (20)	—
180°F (82°C)	—	—	—	40-40-0 (20)
Rust Test, ASTM D665 ⁽³⁾	Pass	Pass	Pass	Pass
RPVOT, ASTM D2272, minutes	2780	2,500	1160	780
ISO VG No.	32	46	68	—
AGMA Grade	0	1	2	—

Note:

- (1) 50 ml. max. at end of blowing period. No foam after 10 minutes setting.
- (2) Hours to reach acid number of 2.0 mg. of KOH per gram of oil.
- (3) Procedures A (distilled water) and B (synthetic sea water) – 24 hours.

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Values shown are typical values only and do not constitute a specification. The information contained herein is subject to change without notice.