



Hydroclear™ El Mar LA4

Conoco Hydroclear™ El Mar LA4 is a premium-quality, low-ash, dispersant-detergent gas engine oil designed for use in 4-stroke cycle and some 2-stroke cycle engines fueled by natural gas or LPG. Made from exclusive Hydroclear™ technology, it combines the best base stock components and field-proven performance additives to provide outstanding engine cleanliness, excellent deposit control and superior wear and corrosion protection. It is recommended for use in stationary gas engines whose manufacturers specify a low-ash oil providing API CF level performance. Hydroclear™ El Mar LA4 is formulated to provide excellent oxidation and nitration resistance, enabling its use in extended, engine-oil drain applications.

Applications

Hydroclear™ El Mar LA4 is recommended for use in turbo-charged, lean burn and naturally aspirated gas engines requiring a low-ash engine oil. Engines operating in this type of service are commonly found in crude oil and gas transmission pipelines, electrical power generators, gas compressors, irrigation water pumps and well-drilling rigs.

Hydroclear™ El Mar LA4 Gas Engine Oils are recommended for use in natural gas engines manufactured by:

- Caterpillar*
- Climax
- Colt-Fairbanks Morse
2-Stroke Cycle, Natural Gas
4-Stroke Cycle, Dual-Fuel
- Cooper-Bessemer, 4-Stroke Cycle
- Cooper-Superior, Spark Ignition
- Dresser-Rand (Categories I, II)
- Dresser-Rand (Category III, SAE 30)
- Ruston
- Minneapolis-Moline
- Nordberg
- Waukesha
VR, VGF, VHP, VSG and ATGL Series
Clinton/Intermediate Series F817G, F1197G, H2476G,
L3712G
- Wartsila
- Worthington, 4-Stroke Cycle

* Successful with the Caterpillar G3500 and G3600 field test protocol. Results reviewed with Caterpillar.

Premium, Low-Ash Natural Gas Engine Oil

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Outstanding Features

- Helps keep engines at peak-operating efficiency
- Outstanding oxidation and nitration resistance
- Superior engine cleanliness
- Protects against valve recession
- Extended head and spark plug life
- Compatible with units equipped with catalytic converters for emission control
- Excellent TBN retention

Hydroclear™ EI Mar LA4 Typical Properties

SAE Grade	30	40	15W-40
Viscosity,			
cSt @ 40°C	93.4	135	113
cSt @ 100°C	11.1	14.0	15.0
SUS @ 100°F	485	707	582
SUS @ 210°F	63.9	75.6	79.5
Viscosity Index	103	102	138
Ash, Sulfated, ASTM D874, wt %	0.47	0.47	0.47
Pour Point, °C (°F)	-30 (-22)	-27(-17)	-40 (-40)
Flash Point (COC), °C (°F)	257 (495)	261 (511)	220 (428)
Density, g/cm ³ @ 15°C	0.878	0.881	0.869
Total Base Number, ASTM D2896	5.3	5.3	5.3
Total Acid Number, ASTM D974	0.55	0.55	0.58
Color, ASTM	7.0	7.0	7.0
High Temperature High Shear Viscosity, 150 C, cP	3.4	3.9	4.1
Viscosity, Cold Cranking (CCS), cP @ °C	—	—	5,275 (-20)
Phosphorus, ppm	260	260	260
Zinc, ppm	310	310	310

Due to continual product research and development, the information contained herein is subject to change without notification.

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