



Insights, Trends, and
Innovations in the
Global Sector

Lube Guide, For:

MARINE LUBRICANTS

— *Powering the World, Fueling the Future*

HD Marine Oils are premium, high-performance lubricants designed for both older crosshead and modern trunk piston marine diesel engines. Available in various TBN and SAE grades, they provide excellent alkalinity control, deposit prevention, and superior engine protection. Blended with advanced additives and quality base oils, these oils ensure cleaner operation, reduced wear, and extended engine life under demanding marine conditions.





INTRODUCTION



Powering the Seas with Reliable Lubrication

Carter Oil delivers advanced marine lubrication solutions engineered to perform under the most demanding maritime conditions. With decades of experience in heavy-duty engine protection, our marine oils are formulated to provide exceptional performance for both crosshead and trunk piston diesel engines. Designed to combat corrosion, reduce deposits, and improve overall efficiency, Carter Oil's marine lubricants ensure vessels operate smoothly, safely, and reliably voyage after voyage.





Shaping the Energy Landscape

Carter Oil's marine lubricants are developed to protect critical components from corrosion, deposits, and wear caused by harsh marine environments. Each product combines premium base oils with an advanced additive system to ensure durability and cleanliness for marine engines and auxiliary systems.

- **HD Marine Oil (System Oil – 15 TBN SAE 40)**
- **Marine Engine & Auxiliary Lubricants**
- **Specialty Marine Lubricants**

OUR **MARINE PRODUCT RANGE**



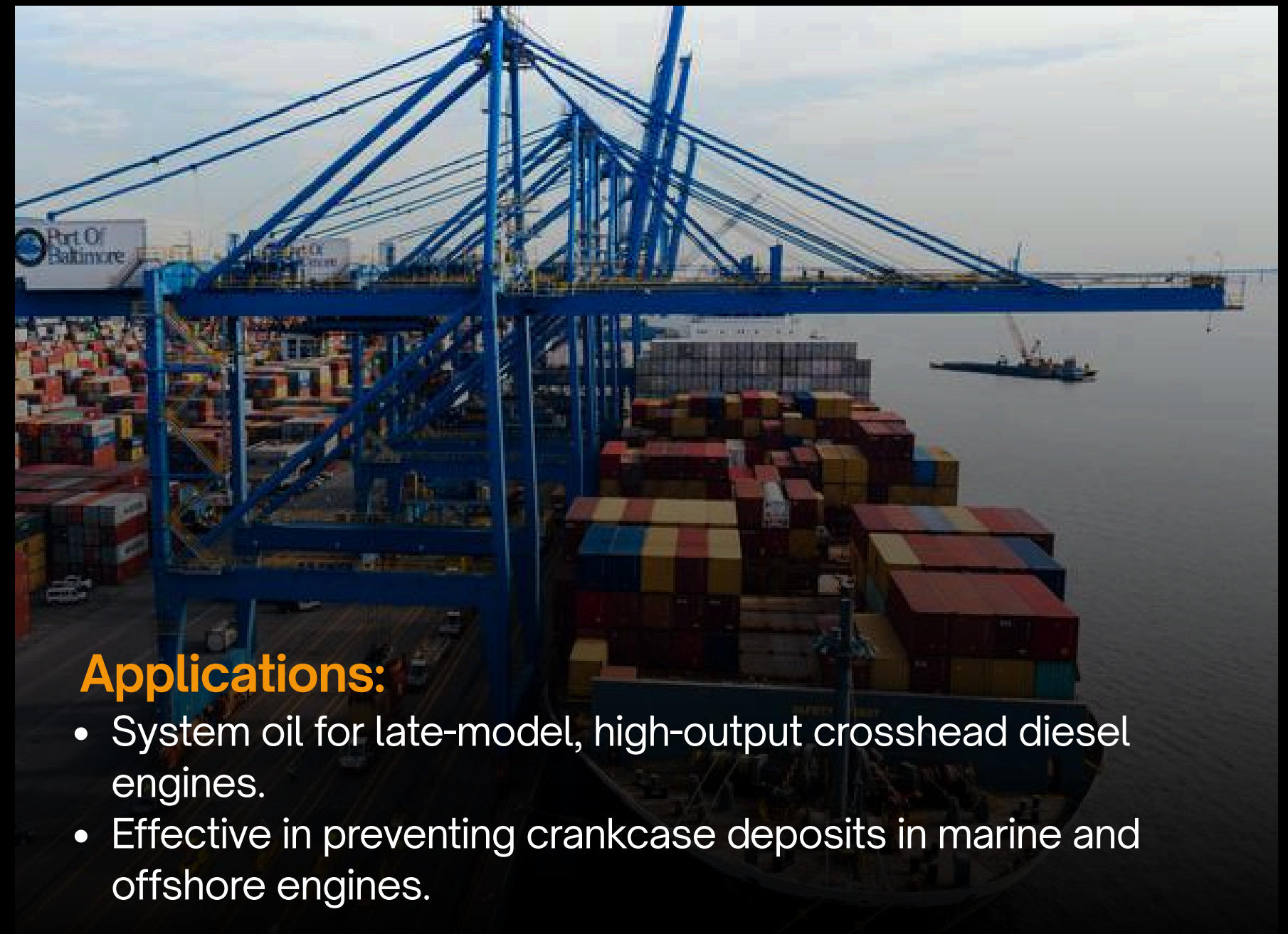


HD Marine Oil is a premium-quality single-grade system oil specifically designed for crosshead diesel engines with water-cooled pistons. Its advanced additive package minimizes piston and crankcase deposits, ensures excellent cooling, and extends oil and bearing life compared to conventional system oils.

- Reduces piston and ring deposits.
- Improves piston cooling efficiency.
- Keeps crankcase and circulation tanks cleaner.
- Extends bearing life and protects critical surfaces.
- Excellent rust and anti-corrosion protection.
- Enhanced load-carrying and anti-wear performance.
- Strong detergency for superior thermal and oxidation stability.

HD MARINE OIL

(SYSTEM OIL — SAE 40, 15 TBN)



Applications:

- System oil for late-model, high-output crosshead diesel engines.
- Effective in preventing crankcase deposits in marine and offshore engines.



HD MARINE OIL

(SYSTEM OIL — SAE 40, 15 TBN)



Technical Specifications:

- SAE Grade: 40
- TBN: 12.8 – 17.2
- Viscosity @ 40°C: 88.6 cSt
- Viscosity @ 100°C: 14.1 cSt
- Viscosity Index: 163
- Flash Point: >194°C
- Pour Point: -30°C



Carter Oil offers a comprehensive line of lubricants for trunk piston engines, marine auxiliaries, and deck machinery. These oils deliver high detergency, oxidation resistance, and corrosion protection-ensuring superior reliability for both propulsion and auxiliary systems.

Key Benefits:

- Protects against corrosion in saltwater environments.
- Maintains engine cleanliness and reduces sludge formation.
- Stable viscosity under varying temperatures and loads.
- Compatible with a wide range of marine fuel types.

MARINE ENGINE & AUXILIARY LUBRICANTS





SPECIALTY MARINE LUBRICANTS



Carter Oil's specialty lubricants are tailored for marine hydraulic systems, gear units, compressors, and steering mechanisms. Formulated for extreme water resistance and long service life, they ensure continuous operation and minimal maintenance in challenging sea conditions.

Key Benefits:

- Excellent water separation and rust prevention.
- Enhanced film strength for shock-load protection.
- Low friction and wear for energy efficiency.
- Suitable for offshore rigs and marine support systems.

Applications:

Steering gears, winches, cranes, and onboard hydraulic systems.





HIGH PERFORMANCE MARINE FLUIDS

9 TBN SAE 30

Marine Oil 9 TBN SAE 30 is a premium single-grade system oil for older crosshead diesel engines with water-cooled pistons. It reduces deposits and offers longer life with advanced additives.

12 TBN SAE 40

HD Marine Oil 12 TBN SAE 40 is a premium high-performance system oil for older crosshead diesel engines with water-cooled pistons. It minimizes deposits and ensures longer engine life with advanced additives.

15 TBN SAE 40

HD Marine Oil 15 TBN SAE 40 is a premium single-grade system oil for older crosshead diesel engines with water-cooled pistons. It prevents deposits and delivers longer engine life with advanced additive technology.





HIGH PERFORMANCE MARINE FLUIDS

20 TBN SAE 40

HD Marine Oil 20 TBN SAE 40 is a high-performance trunk piston engine oil for modern marine diesel engines. Its strong alkalinity (TBN 20) neutralizes acids and ensures long-lasting engine protection.

40 TBN SAE 40

HD Marine Oil 40 TBN SAE 40 is a high-performance trunk piston engine oil for modern marine diesel engines. Its high alkalinity (TBN 40) effectively neutralizes acids and extends engine life.

40 TBN SAE 50

HD Marine Oil 40 TBN SAE 50 is a high-performance trunk piston engine oil for modern marine diesel engines. Its strong alkalinity (TBN 40) neutralizes acids effectively and extends engine life.

70 TBN SAE 50

HD Marine Oil 70 TBN SAE 50 is a high-performance cylinder oil for modern two-stroke marine engines. It offers strong alkalinity control, excellent detergency, and protection against acidic by-products for cleaner, longer-lasting performance.



TYPICAL PROPERTIES



09 TBN SAE 30



Test Parameter	Method	Typical
Specific Gravity @ 15°C	ASTM D4052	0.864
API Gravity @ 15 °C, °	ASTM D4052	33.1
Kinematic Visc. @ 40 °C, cSt	ASTM D7042	67
Kinematic Visc. @ 100 °C, cSt	ASTM D7042	10.7
Viscosity Index	ASTM D2270	151
Flash Point, °C (°F)	ASTM D93	>177 (>350)
Pour Point, °C (°F)	ASTM D97	-30 (-22)
TBN	ASTM D2896	8 - 10



TYPICAL PROPERTIES



12 TBN SAE 40



Test Parameter	Method	Typical
Specific Gravity @ 15°C	ASTM D4052	0.865
API Gravity @ 15 °C, °	ASTM D4052	32.0
Kinematic Visc. @ 40 °C, cSt	ASTM D7042	86.3
Kinematic Visc. @ 100 °C, cSt	ASTM D7042	14.2
Viscosity Index	ASTM D2270	171
Flash Point, °C (°F)	ASTM D93	>194 (>381)
Pour Point, °C (°F)	ASTM D97	-30 (-22)
TBN	ASTM D2896	10.5 - 13.5



TYPICAL PROPERTIES



15 TBN SAE 40



Test Parameter	Method	Typical
Specific Gravity @ 15°C	ASTM D4052	0.864
API Gravity @ 15 °C, °	ASTM D4052	32.3
Kinematic Visc. @ 40 °C, cSt	ASTM D7042	88.6
Kinematic Visc. @ 100 °C, cSt	ASTM D7042	14.1
Viscosity Index	ASTM D2270	163
Flash Point, °C (°F)	ASTM D93	>194 (>381)
Pour Point, °C (°F)	ASTM D97	-30 (-22)
TBN	ASTM D2896	12.8 - 17.2



TYPICAL PROPERTIES



20 TBN SAE 40



Test Parameter	Method	Typical
Specific Gravity @ 15°C	ASTM D4052	0.867
API Gravity @ 15 °C, °	ASTM D4052	31.7
Kinematic Visc. @ 40 °C, cSt	ASTM D7042	91.2
Kinematic Visc. @ 100 °C, cSt	ASTM D7042	14.5
Viscosity Index	ASTM D2270	166
Flash Point, °C (°F)	ASTM D93	184 (363)
Pour Point, °C (°F)	ASTM D97	27 (-17)
TBN	ASTM D2896	17 - 23



TYPICAL PROPERTIES



40 TBN SAE 40



Test Parameter	Method	Typical
Specific Gravity @ 15°C	ASTM D4052	0.867
API Gravity @ 15 °C, °	ASTM D4052	31.7
Kinematic Visc. @ 40 °C, cSt	ASTM D7042	91.4
Kinematic Visc. @ 100 °C, cSt	ASTM D7042	14.2
Viscosity Index	ASTM D2270	161
Flash Point, °C (°F)	ASTM D93	186 (366)
Pour Point, °C (°F)	ASTM D97	-27 (-17)
TBN	ASTM D2896	34 - 46



TYPICAL PROPERTIES



40 TBN SAE 50



Test Parameter	Method	Typical
Specific Gravity @ 15°C	ASTM D4052	0.882
API Gravity @ 15 °C, °	ASTM D4052	28.9
Kinematic Visc. @ 40 °C, cSt	ASTM D7042	130
Kinematic Visc. @ 100 °C, cSt	ASTM D7042	18.9
Viscosity Index	ASTM D2270	165
Flash Point, °C (°F)	ASTM D93	>164 (>327)
Pour Point, °C (°F)	ASTM D97	-21 (-6)
TBN	ASTM D2896	34 - 46



TYPICAL PROPERTIES



70 TBN SAE 50



Test Parameter	Method	Typical
Specific Gravity @ 15°C	ASTM D4052	0.898
API Gravity @ 15 °C, °	ASTM D4052	26.0
Kinematic Visc. @ 40 °C, cSt	ASTM D7042	134
Kinematic Visc. @ 100 °C, cSt	ASTM D7042	18.8
Viscosity Index	ASTM D2270	159
Flash Point, °C (°F)	ASTM D93	>161 (>321)
Pour Point, °C (°F)	ASTM D97	-21 (-6)
TBN	ASTM D2896	60 - 80

➔ APPLICATIONS ACROSS MARINE OPERATIONS

- Ocean-Going Vessels & Cargo Ships
- Fishing Boats & Coastal Fleets
- Offshore Rigs & Marine Platforms
- Auxiliary Equipment & Deck Machinery
- Engine Rooms & Hydraulic Systems



THANK YOU



Get In Touch



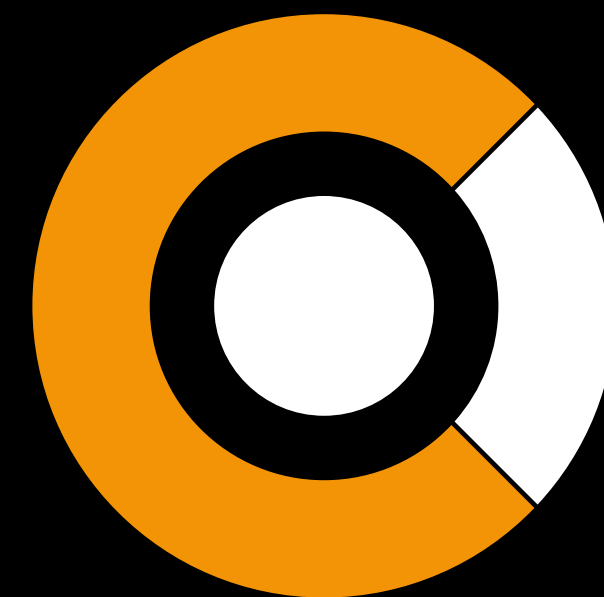
+1 (832) 997-6806



www.carteroilusa.com



sales@carteroilusa.com



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