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## PRODUCT SPECIFICATIONS & TECHNICAL DATA

### PETRO-FLO HIGH TBN MARINE MOTOR OIL SYNTHETIC BLEND FOR DIESEL AND GASOLINE MARINE ENGINES

**PETRO-FLO HIGH TBN MARINE SYNTHETIC BLEND MOTOR OIL** is a premium quality synthetic blend mid ash marine motor oil formulated with a carefully selected blend of high performance additives and a mix of mineral and synthetic base oils to provide complete protection for marine engines and designed to exceed the lubrication requirements of the most modern diesel and gasoline engines used in boating applications.

**PETRO-FLO HIGH TBN MARINE MOTOR OIL** provides excellent protection for both four-cycle gasoline engines, as well as two- and four-cycle high performance diesel engines.

**PETRO-FLO HIGH TBN MARINE MOTOR OIL** minimizes carbon deposits in the piston ring zone, resulting in less ring wear and less cylinder bore polishing. The benefits are less oil consumption, less ring breakage and less piston skirt scuffing. The acid neutralizing additives in **PETROFLO HIGH TBN MARINE MOTOR OIL** help to reduce corrosive wear.

**PETRO-FLO HIGH TBN MARINE MOTOR OIL** provides excellent protection against rust, sludge, and low-temperature deposits which are more commonly a problem in gasoline engines.

#### APPLICATION:

**PETRO-FLO HIGH TBN MARINE MOTOR OIL** meets/exceeds the performance requirements of all diesel and gasoline engine manufacturers specifying the use of an engine oil meeting API CJ-4, CI-4 PLUS, CH-4, CG-4, CF-4, CF-2, CF/SL, CD, SH, SJ or any combination such as CI-4/SL (SAE 15W-40).

**PETRO-FLO HIGH TBN MARINE MOTOR OIL** is recommended for a host of diesel and gasoline engine manufactured by Caterpillar, Cummins, Detroit Diesel, Allison C-4, International/Navistar, John Deere, Mercedes Benz, MTU, Yanmar, Perkins, Volvo, Chrysler, Ford, Mercury, Indmar, China National GB 11122-2006, JASO DH-1, Renault RLD-2, Renault RXD.

**PETRO-FLO HIGH TBN MARINE MOTOR OIL** is available in four viscosity grades: SAE 30, 40, 50 and 15W-40. Always check the owner's manual for the correct viscosity grade to use.

**PETRO-FLO HIGH TBN MARINE MOTOR OIL 15W-40** is designed for use in moderate to severe service, high speed and some medium speed four stroke European, U.S. and Japanese marine diesel engines, where a 15W-40 engine oil is required. It can be used in both turbocharged and naturally aspirated engines running either low or high sulphur diesel fuel. It is especially suited to coastal and fishing fleets but can also be used in recreational craft.

## **BENEFITS:**

- Helps minimize oil consumption
- High TBN to protect against and neutralize acid build up
- Semi-synthetic formulation
- Meets long drain requirements of European, U.S., and Japanese engines
- Excellent anti-corrosion protection of engine parts
- Resists oil thickening
- Shear stable viscosity modifier maintains oil viscosity in service
- Mid ash formulation controls combustion chamber deposits especially around piston area
- Start-up viscosity protection
- Helps protect against ring and cylinder wear
- Helps keep pistons clean
- Neutralizes acids from high sulfur fuel
- Reduces bore polishing
- Increased wear protection for valve trains
- SAE 15W-40 meets/exceeds API CJ-4, CI-4 PLUS, CH-4, CG-4, CF-4, CF/SL, ACEA E4, ACEA E7
- SAE 30 meets/exceeds API CF-4, CF-2, CF/SJ
- SAE 40 meets/exceeds API CF-4, CF-2, CF/SJ
- SAE 50 meets/exceeds API CF-4, CF-2, CF/SJ
- Recommended for gasoline and diesel engines

## **PETRO-FLO HIGH TBN MARINE MOTOR OIL TYPICAL ANALYSIS**

TEST	METHOD	TYPICAL RESULTS			
		15W-40	30	40	50
SAE Viscosity Grade	SAE J300	15W-40	30	40	50
Gravity					
Specific @ 60°F(15.6°C)	ASTMD-287	0.876	0.879	0.882	0.890
°API		30.03	28.0	27.4	26.4
Flash Point, °C(OF) Mm.	ASTM D-92	213(415)	194 (381)	205 (401)	207 (405)
Pour Point, °C(OF) Max.	ASTMD-97	-39(-38)	-33 (-27)	-27 (-17)	-27 (-17)
Viscosity					
40°C, cSt	ASTMD-445	115	88.0	149	207
100°C, cSt	ASTMD-445	15.5	11.0	15.4	18.2
Viscosity Index	ASTMD-2270	145	110	108	106
High Temperature/High Shear Vis., cP	ASTMD-4683	4.0	3.5	4.5	5.1
Zinc, Mass %		0.110	0.110	0.110	0.110
Calcium, Mass %		0.335	0.335	0.335	0.335
Sulphated Ash, mass %		1.31	1.31	1.31	1.31
Total Base Number	ASTMD-2896	10	10	10	10

The above analyses are typical inspections only and the finished product may vary from batch to batch.