

## NAUTIC SUPER OUTBOARD TCWIII MOTOR OIL 2-Stroke

**Bardahl Nautic Super Outboard TCWIII Motor Oil** is a two-stroke oil with a higher quality than prescribed by the leading manufacturers of outboard motors. It exceeds the lubrication regulations of water-cooled outboard engines and air-cooled engines that are heavily loaded and have to run at a high rpm for a long time. **Bardahl Nautic Super Outboard TCWIII Motor Oil** complies with the strict lubrication regulations as drawn up by the National Marine Manufacturer's Association and the Boating Industry Association: NMMA/BIA TC-W3.

**Bardahl Nautic Super Outboard TCWIII Motor Oil** combines the maximum performance of ash less additives with the high quality of base oils that burn clean. This combination ensures that the spark plugs remain clean, no precipitations form and the exhaust ports remain clean and free of rust. **Bardahl Nautic Super Outboard TCWIII Motor Oil** can be mixed with all types of gasoline.

### The problem

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Two-stroke outboard engines must operate at lower temperatures than others two-strokes. Due to these low temperatures, precipitations form that are caused by unburned fuel and oxidation residues. This condense and polymerize components into varnish, gum and carbonous precipitations. Low operating temperatures also cause corrosion, rust and precipitations in the combustion chamber. Chewing pistons and jammed engines may be the result of insufficient lubrication. The high power and speed make outboard engines very sensitive to increased friction, chewing pistons and eventually, lockups. Two-stroke engines run on a thin lubricating film, when this lubricating film is missing pistons are going to 'eat', almost jam and in the worst case they get stuck. Chewing pistons are a sign of lack of lubrication. The friction and wear are aggravated by the presence of coal and varnish on the cylinder wall.

Deposits of oxidized oil and incompletely burned lubricant have a adversely affects the performance of the engine. Stuck piston rings and piston pins caused by gum and varnish (oxidized oil declaps) ensure for reduced compression and power loss. Unburned oil causes carbon deposits that pollute the spark plugs, block exhaust ports and front for inflammation worry. This in turn leads to more power loss and less accomplishments. It is recommended to mix the oil with the gasoline beforehand to ensure that an even mixture is created this prevents increased friction and wear or jamming.

### How it works

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**Bardahl Nautic Super Outboard TCWIII Motor Oil** has managed the most toughest tests to going through the NMMA. These tests include:

- A weighted test to test the lubricating power of the oil in a very skimpy mixture of 150:1 (gasoline and oil).
- A power test that compares the operation of the oil with an existing one reference oil.
- A test that must prove that the oil does not leave any combustion residues or the exhaust ports block at a very rich mixture of 24:1.
- A mixing test that must prove that the oil is completely and evenly with the fuel mixes.

**Bardahl Nautic Super Outboard TCWIII Motor Oil** is a unique blend of high-quality base oils, synthetic anti-wear and high-pressure components and an additive with a high molecular weight. This mixture of special additives and base oils that can burn completely ensure clean combustion, a resistance to oxidation and an exceptional protection against impacting loads.

To prevent piston rings from getting stuck, no varnish forms at the piston pins or piston and no coal forms, Bardahl uses an ashless 'detergent-dispersant' system. This ashless system protects against pre-ignition, clogged exhaust ports and contaminated spark plugs.

**Bardahl Nautic Super Outboard TCWIII Motor Oil** contains special ingredients that form of rust must counteract. A special hydrocarbon with a low viscosity ensures ensure that the oil mixes easily with gasoline and there is an even oil/fuel mixture is formed.

## Manual

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**Bardahl Super Outboard TCWIII Motor Oil** is easy to mix with gasoline and this does not change at very low temperatures. Mix the oil according to the instructions of the engine manufacturer (until 100:1). For competition purposes the ratio fuel/oil depending on the circumstances and the extent to which the engine is stepped up, the adjust the fuel/oil ratio.

This engine oil has been specially developed to the very latest lubrication regulations of outboard engine manufacturers. It complies with the requirements of Johnson/Evinrude, Mercury and other outboard engine manufacturers that adopted the new Nmma/BIA TC-W III or JASO-FB requirements prescribe.

**Bardahl Super Outboard TCWIII Motor Oil** is suitable for all two-stroke engines that have a prescribe ashless oil such as outboard engines, snowmobiles, jet skis and two-stroke snow blowers.

This engine oil can also be used for lawn mowers, grooming machines, leaf blowers, chainsaws and motorcycles.

## Specifications

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NMMA - TC-W3 | OMC - 40/70

**Analysis data**

Test			Results
SAE - Class	Method	Unit	<i>NAUTIC SUPER OUTBOARD TCWIII MOTOR OIL 2-Stroke</i>
Viscosity at 40°C	ASTM D445	mm /s	46
Viscosity at 100°C	ASTM D445	mm /s	7.6
Viscosity Index	ASTM D2270		129
tbn	ASTM D-664	mg KOH/g	4.2
Conradson Carbon Residue		Wt %	0.20
pourpoint	ASTM D6892	°C	-37
Colour	VISUAL		Blue
Specific Gravity at 15/15°C	ASTM D4052	g/ml	0.875
Flashpoint	ASTM D92	°C	96

**Article number** 56305  
**Content** 500ml

**Article number** 56351  
**Contents** 1 liter

**Article number** 56382  
**Contents** 25 liter

**Article number** 56386  
**Contents** 60 liter