



PENNZOIL MARINE® 100% SYNTHETIC OUTBOARD 2-CYCLE OIL

NMMA Certified TC-W3®

PRODUCT DESCRIPTION

PENNZOIL MARINE® 100% SYNTHETIC OUTBOARD 2-CYCLE OIL is a biodegradable, high-flash, ashless 2-cycle engine oil formulated to meet or exceed the warranty requirements of all modern 2-cycle outboard and snowmobile engine manufacturers. It provides excellent lubricity, dispersancy and wear and rust protection.

PENNZOIL MARINE® 100 SYNTHETIC OUTBOARD 2-CYCLE OIL is recommended for use in all makes and models of water-cooled, 2-cycle engines requiring either a pre-mix of oil and gasoline or variable ratio oil injection systems.

PENNZOIL MARINE® 100% SYNTHETIC OUTBOARD 2-CYCLE OIL is certified by the National Marine Manufacturer's Association (NMMA) as an approved NMMA TC-W3® lubricant and is specifically designed for exceptional performance in marine applications.

PENNZOIL MARINE® 100% SYNTHETIC OUTBOARD 2-CYCLE OIL contains only ashless components which helps prevent any lubricant related preignition and spark plug fouling. The ashless additives also help protect against piston and combustion chamber deposits, rust, and corrosion. It resists gel formation due to water or other contamination. The special base stocks used help protect the engine against piston and cylinder wall scuffing.

APPLICATION

PENNZOIL MARINE® 100% SYNTHETIC OUTBOARD 2-CYCLE OIL exceeds the requirements of the NMMA TC-W3® standard. It is recommended for and meets the warranty requirements of outboard engines produced by the following manufacturers:

*Evinrude	*Johnson	*Mercury	*Mariner
*U.S. Marine/Force	*Sears	*Suzuki	*Yamaha

PENNZOIL MARINE® 100% SYNTHETIC OUTBOARD 2-CYCLE OIL mixes easily with gasoline, and is dyed blue to allow for easy detection in premixed fuel. Follow engine manufacturer's recommended fuel/oil ratio for premix systems. It is also recommended for oil injection systems.

PENNZOIL MARINE® 100% SYNTHETIC OUTBOARD 2-CYCLE OIL may also be used in other applications calling for TC-W®, TC-WII®, or TC-W3® approved oils.

BENEFITS

- Helps protect engines against failures due to scuffing, piston ring sticking, port deposits, bearing failures and spark plug fouling
- Exceeds NFPA Code 30 Class IIIB liquids flash point limits. Flash point exceeds 200°F and requires no special warehousing
- NMMA TC-W3® certified. Exceeds warranty requirements for all outboard engine manufacturers
- Biodegradable to help protect the environment
- Mixes easily with fuel for premix applications
- Excellent flow properties for oil injection systems

FUEL MIXING TABLE					
Ratio Fuel to Oil	Ounces of Oil to Gallons of Gasoline			Milliliters (cc) of Oil to Liters of Gasoline	
	1 Gallon	5 Gallon	10 Gallon	1 Liter	10 Liters
	Oz	Oz	Oz	ml (cc)	ml (cc)
16:1	8	40	80	62.5	625
32:1	4	20	40	31.25	312.5
50:1	2.6	12.8	25.6	20	200
100:1	1.3	6.4	12.8	10	100

**TYPICAL PHYSICAL AND CHEMICAL PROPERTIES
PENNZOIL MARINE® 100% SYNTHETIC OUTBOARD 2-CYCLE OIL**

TEST	METHOD	TYPICAL RESULTS
Gravity, API	ASTM D-4052	17.6
Pounds per Gallon	ASTM D-4052	7.89
Flash Point, °C(°F)	ASTM D-93	101(214)
Viscosity		
@ 40°C, cSt	ASTM D-445	55.5
@ 100°C, cSt	ASTM D-445	9.1
Viscosity Index	ASTM D-2270	141
Brookfield Viscosity @-25°C, cP	ASTM D-2983	6300
Pour Point, °C(°F)	ASTM D-97	-30(-34)