

PENNZOIL MARINE® PREMIUM PLUS OUTBOARD 2-CYCLE

NMMA Certified TC-W3®



TECHNICAL DATA SHEET

PENNZOIL MARINE® PREMIUM PLUS OUTBOARD TWO-CYCLE OIL is a premium “Synthetic Blend” 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® PREMIUM PLUS OUTBOARD TWO-CYCLE OIL is a synthetic blend product formulated with a higher additive concentration than required for NMMA TC-W3® certification. This extra level of performance protects outboard engines under the most severe operating conditions.

PENNZOIL MARINE® PREMIUM PLUS OUTBOARD TWO-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's “anti-gel” properties help resist gel formation due to water or other contamination. The special base stocks used resist piston and cylinder wall scuffing.

PERFORMANCE, FEATURES & BENEFITS

- Synthetic blend for high performance applications
- Maximum additive treatment, including increased detergency over the TC-W3® formulation. Helps protect engines against failures due to scuffing, ring sticking, port deposits, bearing failures and 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
- Mixes easily with fuel for premix applications
- Excellent flow properties for oil injection systems

MAIN APPLICATIONS

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

PENNZOIL MARINE® PREMIUM PLUS OUTBOARD TWO-CYCLE OIL may also be used in other applications calling for NMMA TC-W® , TC-WII® , or TC-W3® approved oils.

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SPECIFICATIONS, APPROVALS & RECOMMENDATIONS

PENNZOIL MARINE® PREMIUM PLUS OUTBOARD TWO-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

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Help Desk.

TYPICAL PHYSICAL CHARACTERISTICS

Properties		Method	Pennzoil Marine® Premium Plus Outboard 2-Cycle
Gravity	°API	ASTM D4052	29.8
Pounds per Gallon		ASTM D4052	7.31
Flash Point	°C(°F)	ASTM D93	97(207)
Kinematic Viscosity	@40°C cSt	ASTM D445	59
Kinematic Viscosity	@100°C cSt	ASTM D445	9.37
Viscosity Index		ASTM D2270	133
Brookfield Viscosity	@-25°C cP	ASTM D2983	6300
Pour Point	°C(°F)	ASTM D97	-43(-45)
Material Number	Bulk		3843

These characteristics are typical of current production. While future production will conform to Pennzoil's® specification, variations in these characteristics may occur.

HEALTH, SAFETY & ENVIRONMENT

Health and Safety

Pennzoil Marine® Premium Plus Outboard Two-Cycle is unlikely to present any significant health or safety hazard when properly used in the recommended application and good standards of personal hygiene are maintained.

To find the right Pennzoil® product for your vehicles and equipment, please consult www.pennzoil.com to look up the right motor oil recommendation using our oil selector.

ADDITIONAL INFORMATION

Advice

Advice on applications not covered here may be obtained from your Shell Lubricants distributor representative or Shell Technical Help Desk.

Ratio Gas to Oil	Ounces of Oil to be added				Millilitres of Oil to be added		
	1 Gal	2 Gal	5 Gal	10 Gal	1 Litre	5 Litres	10 Litres
16:1	8	16	40	80	62.5	312.5	625
32:1	4	8	20	40	31.25	156.25	312.5
40:1	3.2	6.4	16	32	25	125	250
50:1	2.6	5.2	12.8	25.6	20	100	200
100:1	1.3	2.6	6.4	12.8	10	50	100

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Avoid contact with skin. Use impervious gloves with used oil. After skin contact, wash immediately with soap and water.

Guidance on Health and Safety is available on the appropriate Material Safety Data Sheet (MSDS), which can be obtained from www.epc.shell.com

Protect the Environment

Take used oil to an authorised collection point. Do not discharge into drains, soil or water.