

# PZL® PREMIUM OUTBOARD & MULTIPURPOSE 2-CYCLE OIL

NMMA Certified TC-W3®

TECHNICAL DATA SHEET



PENNZOIL® PREMIUM OUTBOARD AND MULTI-PURPOSE TWO-CYCLE OIL is certified by the National Marine Manufacturer's Association (NMMA) as an approved NMMA TC-W3® lubricant. It contains Pennzoil premium quality lubricating oil plus ashless additives and increased detergency to give the best quality protection in all types of high performance two-cycle engines calling for TC-W®, TC-WII® and TC-W3® oils. PENNZOIL® PREMIUM OUTBOARD AND MULTI-PURPOSE TWO-CYCLE OIL also exceeds the performance requirements of the API TC Service Classification which is commonly recommended for air-cooled two-cycle engines.

PENNZOIL® PREMIUM OUTBOARD AND MULTI-PURPOSE TWO-CYCLE OIL contains only ashless components which prevent any lubricant related preignition and plug fouling. The ashless additives protect against piston and combustion chamber deposits, rust, and corrosion. It resists gel formulation due to water or other contamination. The special base stocks used resist piston and cylinder scuffing.

## PERFORMANCE, FEATURES & BENEFITS

- Maximum additive treatment, including increased detergency over the TC-WII® formulation, protects your engine against failures due to scuffing, ring sticking, port deposits, bearing failures and plug fouling
- TC-W3® approval means that your warranty is safe and that you are using the most advanced technology available since this standard is recognised by all outboard and snowmobile engine manufacturers
- Mixes easily with fuel for premix applications
- Exceeds NFPA Code 30 Class IIIB liquids flash point limits
- Exceeds the requirements of the API Service Classification TC for two-cycle lubricants for air-cooled engines. The optimum mix of lubricating base stocks maintains the proper grade, gives maximum protection against scuffing and assures good low temperature fluidity
- Flash point greater than 200°F and requires no special warehousing
- PREMIUM OUTBOARD AND MULTI-PURPOSE TWO-CYCLE OIL is manufactured to the same rigid quality standards set by Pennzoil® for all their other products
- Excellent low-temperature pumpability for all applications.

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# PZL® PREMIUM OUTBOARD & MULTIPURPOSE 2-CYCLE OIL NMMA Certified TC-W3®

## SPECIFICATIONS, APPROVALS & RECOMMENDATIONS

PENNZOIL® PREMIUM OUTBOARD AND MULTI-PURPOSE 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

It also meets manufacturer's requirements for use in snowmobile engines found in the following brands:

- \*John Deere
- \*Kawasaki
- \*Polaris Star
- \*Scorpion

- \*Yamaha
- \*Arctic Cat
- \*Ski-doo

PENNZOIL® PREMIUM OUTBOARD AND MULTI-PURPOSE TWO-CYCLE OIL mixes easily with gasoline and flows through injectors, even at very low temperatures. It is dyed blue to allow for easy detection when mixed with gasoline. Follow engine manufacturer's recommended fuel/oil ratio.

PENNZOIL® PREMIUM OUTBOARD AND MULTI-PURPOSE TWO-CYCLE OIL may also be used in other applications calling for TC-W®, TC-WII®, or TC-W3® approved oils. PENNZOIL® PREMIUM OUTBOARD AND MULTI-PURPOSE TWO-CYCLE OIL exceeds the API TC Service Classification requirements. This means PENNZOIL® PREMIUM OUTBOARD AND MULTI-PURPOSE TWO-CYCLE OIL is suitable for use in air-cooled, two-cycle utility engines, such as those found on string trimmers, chain saws, lawn mowers, motorcycles, mopeds and golf carts.

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

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

## TYPICAL PHYSICAL CHARACTERISTICS

Properties		Method	PENNZOIL® PREMIUM OUTBOARD AND MULTI-PURPOSE TWO-CYCLE OIL
Gravity	°API	ASTM D287	30.9
Pounds per Gallon		ASTM D1298	7.253
Kinematic Viscosity	@40°C cSt	ASTM D445	58.7
Kinematic Viscosity	@100°C cSt	ASTM D445	9.53
Viscosity Index		ASTM D2270	133
Brookfield Viscosity	@-25C cP	ASTM D2983	6800
Flash Point	°C (°F)	ASTM D93	100 (212)
Pour Point	°C (°F)	ASTM D97	-39 (-38)
Material Number Bulk			3980

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

# **PZL® PREMIUM OUTBOARD & MULTIPURPOSE 2-CYCLE OIL NMMA Certified TC-W3®**

## **HEALTH, SAFETY & ENVIRONMENT**

### **Health and Safety**

Pzl® Premium Outboard & Multipurpose 2-Cycle Oil (TC-W3) 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.

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](http://www.epc.shell.com)

### **Protect the Environment**

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

## **ADDITIONAL INFORMATION**

### **Advice**

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

### **Fuel Mixing Table**

<b>Ratio Fuel to Oil</b>	<b>Ounces of Oil to Gallons of Gasoline</b>			<b>Millilitres of Oil to Litres of Gasoline</b>	
	<b>1 Gallon</b>	<b>5 Gallon</b>	<b>10 Gallon</b>	<b>1 Litre</b>	<b>10 Litres</b>
	<b>Oz</b>	<b>Oz</b>	<b>Oz</b>	<b>ml (cc)</b>	<b>ml (cc)</b>
<b>16:1</b>	8	40	80	65	625
<b>24:1</b>	5.5	26.5	53	40	420
<b>32:1</b>	4	20	40	30	315
<b>50:1</b>	2.5	13	26	20	200
<b>100:1</b>	1.5	6.5	13	10	100