

# AMSOIL® SAVE<sup>10</sup>

NEWS AND IDEAS FROM AMSOIL

AMSOIL INC. • 925 TOWER AVE. • SUPERIOR, WISCONSIN 54880 • 715-392-7101 • FAX 715-392-5225

## Field Study Reveals AMSOIL HP Marine™ Synthetic 2-Stroke Oil Prevents Ring Sticking & Piston Scuffing

High-quality motor oil is critical for maximum performance in modern two-cycle marine motors. Direct fuel injection (DFI) improves combustion efficiency, delivering the extra power enthusiasts want, while leaner gas-to-oil ratios provide the reduced exhaust emissions the government mandates. The leaner ratio leaves less oil to lubricate and protect these hotter, more powerful motors, which invites deposits and wear that threaten engine performance and life. HP Marine is proven to excel in these harsh conditions. It controls performance-robbing friction, heat and wear, yet produces low smoke and has low aquatic toxicity properties. It's an oil as advanced as the engines it protects.

### Outstanding Wear Protection

The elevated heat and friction of modern two-cycle marine motors can exceed the film strength of inferior oils, increasing the likelihood of scuffing and wear. HP Marine's exclusive synthetic formulation provides increased lubricity for reduced wear during normal and lean-mix operation (see results inside). In 534 hours of field testing, HP Marine completely prevented piston skirt and cylinder bore scuffing, demonstrating its superior lubricity and ability to reduce friction between moving parts. It maintains a strong lubricating film even in lean-mix, severe-service conditions, helping marine engines achieve maximum life.

*Continued on page 3*



- NO Ring Sticking
- NO Piston Scuffing
- NO Cylinder Bore Scuffing

Visit [amsoil.com/proof](http://amsoil.com/proof) for complete details

**INSIDE: Motorcycle Oil: What Difference Does it Make?**

## Simplify Vehicle Maintenance with MyAMSOILGarage™

With a free, online MyAMSOILGarage account, users can...

- Store and organize vehicle maintenance records
- Establish email service reminders
- Track oil changes and other services
- Obtain AMSOIL product recommendations

Whether for work or play, MyAMSOILGarage stores and organizes maintenance records for an unlimited number of vehicles and equipment, including cars, motorcycles, lawn mowers and more. MyAMSOILGarage includes several preset menu options when entering vehicle information. Users can also create records for vintage cars, farm implements and other vehicles that don't appear as preset options. If you own it, MyAMSOILGarage can accommodate it.



**MyAMSOILGarage™**

Maintenance services are also customizable, allowing users to document any and all services performed. Users can elect to automatically receive email reminders for upcoming services.

MyAMSOILGarage provides fast AMSOIL product recommendations for auto & light truck and powersports applications. With one click of the mouse, users can place orders through the AMSOIL Online Store.

To establish a free MyAMSOILGarage account, visit [www.amsoil.com/whymygarage.aspx](http://www.amsoil.com/whymygarage.aspx).

## SAVE<sup>10</sup>

In appreciation of your previous patronage and membership, AMSOIL is offering 10 percent off all future orders. As long as you place an order within 15 months of your membership's expiration date, and at least once every 15 months thereafter, you will continue to qualify for this discount. That is, of course, unless you decide to take advantage of AMSOIL wholesale pricing once again by renewing your Dealership or Preferred Customer membership (see back cover for details).

This is just a small way for AMSOIL to say "Thank You" to its loyal customers.

**U.S. & CANADA TOLL-FREE ORDERING: 1-800-777-7094**

Hours: 7 a.m. to 5 p.m., Central Time, Monday through Friday.

# Motorcycle Oil: What Difference Does it Make?

Few debates among bikers can match the intensity of the one over motor oil selection. Criticizing someone's choice of oil usually sparks a chain reaction of spirited defenses of particular brands and types of oil, specifically conventional versus synthetic.

What are the differences between conventional and synthetic motorcycle oil? In short, the quality of their ingredients. Both contain two basic components: base oils and additives. Base oil quality determines a number of key performance properties, including oxidative stability (the ability to resist chemical breakdown), heat resistance, viscosity retention (the ability to resist thinning) and pour point (fluidity at low temperatures). The goal in manufacturing base oils is a molecularly uniform, pure substance since inconsistencies and impurities limit performance. Additives in the final formulation offer specific performance features not provided by base oils, like the ability to resist corrosion that may form when bikes are in storage.

The base oils used in conventional oils are anything but uniform and pure. They are refined from crude oil pumped from within the earth, which is a poor lubricant in and of itself; it's a thick, messy, foul-smelling raw material teeming with molecules of different weights. Sulfur, paraffin (wax), nitrogen, oxygen and nickel are just some of the molecules in crude harmful to the lubricating process. Paraffin, for example, thickens as the temperature drops, inhibiting the

oil's ability to quickly flow to critical engine parts at start-up. Impurities cause the oil to oxidize sooner—in layman's terms, break-down—requiring it to be changed.

Although the refining process used to manufacture conventional base oils removes some of the molecular inconsistencies and impurities, it can't get them all, resulting in reduced performance.

For example, their ability to resist heat suffers. The oil can volatilize, or literally boil off, especially in high-displacement, air-cooled bikes operating at the height of summer. The elevated heat results in evaporation, causing the oil level to drop. Some of the oil exits the exhaust pipe as emissions; some vaporizes into harmful deposits that form on critical engine parts, like the spark plugs, piston crowns and exhaust valves. In a matter of time, poor performance can set in, resulting in reduced efficiency and difficult starts.

Just as problematic, conventional oils are more prone to losing viscosity due to mechanical shear. Viscosity is one of the most important features of oil, and the engine is designed to run on oil with a specific viscosity. The churning action of high-rpm engine parts and transmission gears, coupled with elevated heat, can literally tear apart, or shear, the molecular structure of the oil, particularly the unstable molecules in conventional oils. As a result, the oil loses viscosity and becomes thinner, compromising wear protection.

In contrast, the chemical reaction process used to manufacture synthetic base oils produces molecularly uniform, pure base oils. Synthetics demonstrate increased resistance to heat and mechanical shear compared to their conventional counterparts. By engineering lubricants with synthetic base oils that contain uniform molecules and no impurities, manufacturers can tailor their formulations to address the problems posed by powerful, hot-running bikes, like high heat and mechanical shear. The end product simply performs better.

As bike manufacturers continue squeezing the greatest amount of power and efficiency out of smaller engines, the challenges of elevated heat and shearing conditions will only worsen. Not only that, but what biker doesn't want more power and maximum fuel efficiency? Synthetics' uniformity reduces friction compared to conventional oils, often resulting in a slight bump in horsepower and fuel economy.

Conventional oils are limited in the level of performance they can provide. For that matter, so are synthetic blend oils, which combine an undisclosed percentage of synthetic base oils with conventional base oils. AMSOIL Synthetic Motorcycle Oil represents one of the least expensive long-term investments bikers can make in the performance and longevity of their motorcycles.

---

## AMSOIL Synthetic Motorcycle Oil



**AMSOIL 20W-50 Synthetic Motorcycle Oil** is recommended for Harley-Davidson, Buell, KTM, Ducati, BMW, Aprilia and Triumph motorcycle engines, transmissions and primary chaincases.

**AMSOIL 10W-40 Synthetic Motorcycle Oil** is recommended for Honda, Kawasaki, Yamaha, Suzuki, Victory, BMW and Husqvarna motorcycle engines and transmissions.

**AMSOIL 10W-30 Synthetic Motorcycle Oil** is recommended for Honda, Yamaha, Suzuki and Kawasaki motorcycle and scooter engines and transmissions.

**AMSOIL SAE 60 Synthetic Motorcycle Oil** is recommended for early-model air-cooled V-Twin engines where a 60-weight motor oil is specified. SAE 60 motor oils are commonly used in Harley-Davidson Knucklehead, Panhead, Shovelhead and big-bore motorcycles.

Visit [www.amsoil.com](http://www.amsoil.com) for pricing.  
For specific viscosity grade recommendations, consult your owner's manual  
or the Powersports Product Lookup at [www.amsoil.com](http://www.amsoil.com).

# HP Marine Synthetic 2-Stroke Oil Continued from page 1

## Excellent Deposit Control

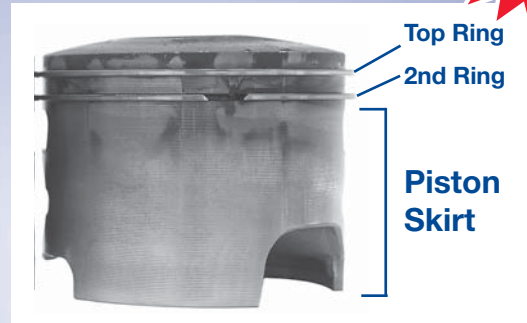
HP Marine is formulated with MAXDOSE™, a system of advanced additives for “super-clean” operation. It helps prevent deposits that lead to poor performance. In field testing, HP Marine inhibited ring deposits that can cause ring sticking and ring jacking (carbon build-up behind the ring, forcing it outward), a phenomenon that occurs in modern DFI outboard motors. It also virtually eliminated exhaust port deposits for reliable, efficient operation.

## Applications

Use HP Marine™ in all two-cycle outboard motors including, but not limited to, Johnson® and Evinrude® FICHT® & E-TEC™ (replaces XD100™ 2-Cycle Oil); Mercury® EFI & Optimax®; Yamaha®; Nissan® and Tohatsu® TLDI®; Suzuki®; Mariner® and Force®. It is also recommended for use in all two-cycle personal watercraft (PWC). Use as injection oil or as 50:1 pre-mix (2.6 oz. per U.S. gallon of gas) where NMMA TC-W3 or API TC oils are specified.

## HP Marine E-TEC Field Study Results

*The piston rings earned a perfect merit rating of 10, demonstrating premium, no-stick performance. The piston skirts demonstrated 0.00% scuffing, proving HP Marine's superior lubricity and friction-reduction capabilities.*



For complete study results, visit [amsoil.com/proof](http://amsoil.com/proof).

## Proven in Marine E-TEC Field Study

HP Marine was installed in a 250-hp Evinrude E-TEC engine powering a heavy-duty marine rescue vessel. Following a 28-hour break-in period at the normal oil setting, the engine was programmed to its factory-lean setting and operated for 506 hours prior to disassembly. An ASTM-calibrated rater examined and awarded each component either a merit rating on a scale of 0 to 10 (with 10 representing no distress) or a percentage rating (with 0 percent representing no distress). Results prove HP Marine provided exceptional wear protection and deposit control.



### HP Marine™ Synthetic 2-Stroke Oil NMMA TC-W3 / API TC

Stock #	Units	Pkg./Size	Wt. lbs.	U.S. Sugg. Retail	U.S. Save 10	Canadian Save 10	U.S. Dealer/PC
HPMQT	EA	1 Quart	2.0	8.90	8.01	8.60	6.85
HPMQT	CA	12 Quarts	24.0	120.30	109.17	102.06	89.10

### Formula 4-Stroke Marine Synthetic Motor Oil NMMA TC-W3 / API SL / JASO MA/MA2

Stock #	Units	Pkg./Size	Wt. lbs.	U.S. Sugg. Retail	U.S. Save 10	Canadian Save 10	U.S. Dealer/PC
WCTQT	EA	1 Quart	2.0	10.10	9.09	9.72	7.80
WCTQT	CA	12 Quarts	24.0	119.70	107.73	115.56	88.65
WCFQT	EA	1 Quart	2.0	10.85	9.77	10.44	8.35
WCFQT	CA	12 Quarts	24.0	128.60	115.74	124.20	95.25

For four-stroke marine applications, AMSOIL Formula 4-Stroke® Marine Synthetic Motor Oil offers outstanding wear protection and viscosity stability, low volatility and excellent low-temperature fluidity. It is certified to meet NMMA FC-W performance specifications, while meeting “Warranty Certified” status of engine manufacturers. Available in 10W-30 (WCT) and 10W-40 (WCF).



# SAVE 10

NEWS AND IDEAS FROM AMSOIL

## Renew Today!

Saving 10 percent off retail prices through the *Save 10 Program* is great, but it doesn't match the value of wholesale pricing. Renew your Dealer/ Preferred Customer membership today to get factory-direct pricing on premium AMSOIL lubricants and filters. You can reactivate anytime by visiting [www.amsoil.com](http://www.amsoil.com) and adding "PC Membership" to your cart in the Online Store, by calling (800) 777-7094 or by mailing the form below to: AMSOIL INC., Attn.: Renewals, 925 Tower Ave., Superior, WI 54880

	U.S.		Canada	
	Dealer	Preferred Customer	Dealer	Preferred Customer
<input type="checkbox"/> 1-Year Renewal	\$30	\$20	\$45	\$30
<input type="checkbox"/> 5-Year Renewal	\$120	\$80	\$180	\$120
<input type="checkbox"/> 10-Year Renewal	\$225	\$150	\$340	\$225

Name \_\_\_\_\_ Z.O. \_\_\_\_\_

Amount Enclosed \_\_\_\_\_ Check No. \_\_\_\_\_

Credit Card:  MC  VISA  Discover Card No. \_\_\_\_\_ Exp. \_\_\_\_\_

Complete Name on Card \_\_\_\_\_

Credit Card Mailing Address \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**The AMSOIL Save 10 Newsletter sent courtesy of AMSOIL INC.**

Printed in U.S.A. © Copyright 2012

7/12

Jeff Fisher  
866-292-4700  
[www.SyntheticOils.us](http://www.SyntheticOils.us)

AMSOIL INC.  
925 Tower Ave.  
Superior, WI 54880  
Fax: (715) 392-5225  
Phone: (715) 392-7101

