

# THE GREAT OIL DEBATE: AMSOIL

*The manufacturer of the first API-rated synthetic motor oil offers its experience and insights*

**The cover of a recent *Forbes* exclaims in large red letters, "What Is True?"** The magazine chooses a theme for each issue and in an age of information, misinformation, and dis-information, it comes as no small surprise that people are confused about almost everything. Contradictions and competing viewpoints abound. No question about it, it's not easy being a consumer sometimes.

Nowhere is this more of a problem than in the area of motorcycle lubrication. On the one hand, bike owners are told by equipment manufacturers that automobile oils are not capable of protecting their bikes. On the other hand, a synthetic motor oil company like Amsoil has been providing motorcycles with superb performance and protection for nearly three decades. What's a motorcyclist to believe?

Last spring Donny Petersen defended, even recommended, the use of synthetic motor oils. In the November issue, Harley-Davidson responded, taking Donny to task and challenging many of his assertions. A rebuttal by Chuck Goldmann (ExxonMobil) provided readers with an excellent overview of synthetic motor oils and their advantages over petroleum.

I'd like to thank *American Iron Magazine* for creating this opportunity for the exchange of ideas regarding the care and feeding of our machines, and commend Donny's courage in putting his convictions down in black and white as a starting point. It's always easier to say nothing than to go on record and get fired at from every angle. The likelihood of getting shot is significantly reduced when you avoid the front lines.

This article is a response to all three of the above-mentioned articles. Amsoil synthetic motor oils were the first API-rated synthetic motor oils in the world when introduced in 1972. With nearly three decades of experience and documentation, Amsoil can make a contribution to this Great Oil Debate. Our tech services staff has

been answering questions from concerned Harley riders for ages anyway. We might as well attempt to present publicly what we have been saying all along.

My premise is this: Everyone knows synthetic oil is better than refined petroleum. Why not use it?

## **SYNTHETICS OFFER SUPERIOR PERFORMANCE & PROTECTION**

The advantages of synthetic motor oils are well-known and have been written about for decades. I have SAE (Society of Automotive Engineers) papers in my files that repeatedly endorse the various benefits of synthetics. Whether extended service life, improved fuel economy, increased power, reduced friction and wear, resistance to breakdown, better low and high temperature protection, you name it, the documentation is out there. The studies have been done.

All of this leads one to ask a couple of fundamental questions. Is the Harley V-Twin engine different from all other engines in the world? Is there something unique about a Harley engine that all of the lubrication rules that apply to all other four-stroke engines must be thrown out the window? Yes, theirs is air-cooled and can run hot. For this reason alone one would think it even more important to have premium synthetic motor oil.

One of Donny's comments that bears repeating came near the conclusion of his April column. "The Motor Company didn't reinvent the air-cooled engine, and, therefore, its engines don't require specially formulated, Harley-only fluids." This summary remark stands at the crux of the debate.

**DUAL-QUALIFIED OILS** There were two topics which the previous writers waded into with great detail that I would like to revisit briefly: dual-quali-



fied motor oils and additive chemistry.

Historically, one of the biggest problems Amsoil has faced when selling motor oils to the motorcycle market has to do with this notion that automobile oils can't be used in motorcycles. Chuck Goldmann did an excellent job of explaining how some motor oils might not be suited for both applications, but that some motor oils most certainly are. (I won't fault him for mentioning that he personally uses a Mobil product. As you would expect, we use Amsoil products.)

There are actually two issues here. The first is that the motor oil be capable of meeting both passenger car and diesel performance requirements. The second issue has to do with the use of friction modifiers. The truth is that friction modifiers have never been a real performance issue. OEMs (bike manufacturers), however, created such a strong public perception against them that in 1998 Amsoil reformulated its two leading oils for the motorcycle market. Later, because of the continued misinformation that automobile oil cannot be used as motorcycle oil, Amsoil took the last step of producing two grades of Amsoil synthetic motorcycle oil.

Public perceptions and fears can drive consumer behavior, whether true or not. Last year's Millennial Day Meltdown fear resulted in tremendous sales of generators and packaged dried foods. The fear driving this debate revolves around the question of whether it is acceptable or safe to use anything but H-D oil.

**CHEMISTRY CLASS** All of the articles presented chemistry lessons. I'm not sure how important many of these details are for riders, but it is fascinating for those of us who are so inclined.

Do you really need a chemistry degree in order to choose a motor oil? No, but it's good to remember that all motor oils are not created equal.

It is unlikely that any major motor oil company today is going to produce a really bad product. But is "adequate"

what riders really want? If you are going to change it frequently; if you are going to be a kind, tame rider who never gets on the throttle, well, Harley-Davidson oil is just fine, as most motorcycle oils probably are. But if you're the kind of rider who puts your machine through its paces, who makes modifications that bump your horsepower to the next level; if you're cranking it up and you want to know your engine has the protection it

also important. In short, you want an experienced manufacturer who understands the interrelationship of the various components of the lubricants being produced. It is not simply a matter of putting ingredients together.

Harley-Davidson noted, correctly, that "you cannot distinguish between a good motor oil and a better motor oil by additive metals analysis alone." Remember, though, that this is not the same as saying additive metals don't make a difference. The truth is that a manufacturer can skimp on certain chemicals to keep costs down and consumers will not notice anything, even though there are consequences. I would like to use an example from a different industry to illustrate my point.

In the realm of house paint, not all paints are created equal. If you take a really cheap white paint, you may need three coats of it to cover a medium-colored surface. If you take a very high-end, professional-grade paint, you can cover that surface with one coat. I once painted a black door white with a single coat of premium, quality paint. All of these paints look white inside the pail, but the high-quality paint has a higher additive content.

By increasing the amount of titanium white, an additive, you can get better coverage. This additive is expensive, however, and people often do not wish to pay the price, so paint manufacturers produce low-end products to satisfy the consumer who wants to buy on price. Savvy consumers who value their time are willing to pay more to get the better, one-coat coverage.

When it comes to additives, Amsoil spends more so that the oil exceeds, not simply meets, the demands of a long-life lubricant. High TBN, and sufficient zinc and phosphorous, helps reduce engine corrosion and wear, increases oil service life, and reduces maintenance costs.

**REAL BENEFITS FOR RIDERS**

What does all this mean for readers? There are two very real and noticeable



needs, or simply want the best, a premium synthetic motorcycle oil is the lubricant of choice.

Here's how I see it. Additive chemistries are just that: additives. They are chemicals that have been added to the base stock. These chemicals have various functions. But the final product can only be as good as the foundation you build on. Quite honestly, there would be no synthetic motor oil market if the only thing you needed to do to get premium performance from crude oil was to put some chemicals in it. The fact is petroleum has its limitations. All oils are not created equal.

A premium product does not end with the base stock. Additive selection makes a difference. Chuck Goldmann notes that not only is selection important, the process of assembling the motor oil is

benefits for bikers who use a premium synthetic motorcycle oil like Amsoil. First, the engine runs cooler. Reduced friction results in cooler operating temps. If you are riding hard out on the desert or stuck in city traffic in L.A., you can definitely feel the heat from your engine. What can you do? Use a premium synthetic and run perceptibly cooler.

The second benefit, extended drain intervals and longer service life, is appreciated by many Amsoil users. Instead of having to change the oil mid-way through the season, you simply change the filter. The oil's additive package is beefy enough so that the oil is good to go for up to three times the equipment manufacturer's recommendation or one year, whichever comes first. If you are uncomfortable with extended drains you can still change at normal intervals and needn't fear if inconveniences cause you to go beyond your normal oil change interval.

Another, less noticeable but very real benefit of a beefy additive package in a synthetic is this: at the end of the year, bikers in northern tier states also appreciate knowing that the anti-corrosive

characteristics of a premium synthetic are better than their petrol counterparts. There is less likelihood of rust and pitting on parts inside the engine as it sits idle through the winter.

**WARRANTY ISSUES** A major concern many riders have had pertains to the warranty issue. Many Harley-Davidson owners believe that if they use any oil besides Harley-Davidson's, the bike's warranty will be voided. Many motorcycle shops believe this to be the case, although the writer of the November Harley-Davidson article indicates that "in a pinch Harley-Davidson recommends that a rider use one of the API C category oils as a substitute for Harley-Davidson 360."

Nevertheless, the impression is out there that the warranty will be voided if you use another product, and since the bike has cost a good chunk of change, no one really wants to gamble with that much money on the table. Fortunately, there is a law called the Magnusson-Moss Act that says, in layman's terms, that an OEM cannot require a consumer to use an OEM part or fluid in order to

maintain warranty coverage unless that part or fluid is provided free of charge.

I can't speak for other oil companies, but I can say that Amsoil warrants its oil against lubrication-related failure. We have 28 years' experience and wouldn't be in business today if engine failures were a problem. We have more experience with synthetics and extended drain intervals than anyone in the industry.

**MARKETING** Donny wrote in his April column, "...there is nothing wrong with Harley oil, and it is a good fossil oil to run in your bike. It is just that modern marketing can be very skillful in making the consumer paranoid about using anything but the manufacturer's suggested oil. There are better oils out there. Period." Right on, Donny. I couldn't agree more.

It would appear that Harley-Davidson has made a marketing decision, but what about H-D owners? Do owners want to be forced to use a particular oil when they believe other products can provide better protection, reduce heat, and increase horsepower?

A lot of riders change ignitions and make other engine modifications to get more horsepower. This puts more stress on the engine and creates more heat. Perhaps even a majority of riders modify their bikes to increase performance and most really ought to be using a higher performance motor oil. With more heat generated, oil breakdown does occur. The graph on oxidation performance in the December issue shows a shocking difference between HD 360 and Mobil 1 V-Twin oil. This chart, and many other tests for benchmarking performance, prove emphatically the superior capabilities of synthetic motor oils.

**IN SUMMARY** Synthetic motor oils offer numerous performance advantages over conventional petroleum-based products. For this reason, in nearly every other market – from trucks, to cars, to heavy equipment, to sport vehicles – synthetics have been greeted with increasing enthusiasm. The technology is proven. The benefits are many. There seems to be no good reason why motorcycle owners should be discouraged from embracing this trend. **AIM**

## Amsoil Synthetic Oil

In 1994, Lt. Col. Albert J. Amatuzio was inducted into the Lubricants World Hall of Fame for his pioneering work in the development of synthetic motor oil. During his 25 years as an award-winning jet fighter pilot, he had gained an appreciation for the extraordinary lubricants that protected the engines of the jets that he flew. He recognized that only synthetic lubricants could stand up to the demanding operating conditions of jet engines and the severe temperature extremes they encountered.

In the mid-1960s, Al Amatuzio began his quest to develop a synthetic motor oil for cars, trucks, motorcycles, and other internal combustion engines. After an intense period of research and development, he assembled a team of chemists and directed the formulation of the first synthetic motor oil in the world to meet American Petroleum Institute service requirements.

The introduction of Amsoil synthetic motor oil set new standards for motor oil quality. Amsoil synthetic motor oil performed like no other before it, outperforming conventional petroleum motor oils on all counts. From the start it became apparent that this innovative product would play a role in engine performance and engine life.

Amsoil products were initially sold through individual dealers by word of mouth. In the 1980s, Amsoil products became available at auto parts stores and other retail outlets that sell motor oils and lubricants. It is now available in tens of thousands of locations across North America. While on the road, you can check the local Yellow Pages for the nearest dealer. Amsoil motorcycle oils and performance products are also available on the Internet at [www.amsoil.com](http://www.amsoil.com). For your nearest Amsoil distributor call 800/777-8491. ■