

AMSOIL®

►DISTRIBUTOR EDITION

MAGAZINE

SEPTEMBER 2020



European Motor Oil Refresh

| PAGE 10



PRODUCT SPOTLIGHT: AMSOIL FOGGING OIL (FOG)

WHAT IS IT?

- **Aerosol spray formulation** that provides long-term protection for stored seasonal equipment

WHAT DOES IT DO?

- **Protects** against corrosion and dry starts
- **Helps** extend engine life and reduce operating expenses
- **Offers** easy and clean applications while reaching more components

WHO IS IT FOR?

- **Owners of two- and four-stroke recreational vehicles, handheld power equipment, small engines and construction and farm equipment** that are operated seasonally or infrequently, then stored for long periods of time. Applications include motorcycles, snowmobiles, ATVs/UTVs, outboard motors, stern drive and inboard marine engines, personal watercraft, lawn equipment, chainsaws, snowblowers, portable generators, hand-held power equipment, motor scooters, powered farm equipment, powered construction equipment, cars and trucks.

Fall is here, and now is a great time to contact your customers and accounts to ensure they're fully stocked with AMSOIL products for all their seasonal storage needs.





DISTRIBUTOR

EDITION

SEPTEMBER 2020

STAFF

Editor

Terry Johnsen

Associate Editor

Joel Youngman

Staff Writers

John Baker
Jamie Trembath
Joel Youngman

Graphic Design Manager

Jeff Spry

Senior Graphic Designer

Luke Boynton

Content Contribution

Eric Brandenburg
Alex Thompson

Editorial Contribution

Len Groom
Jamie Prochnow

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On the Web

www.AMSOIL.com
www.AMSOIL.ca

President & CEO

Alan Amatzuzio

Board Chair

Dean Alexander

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Letters to the Editor

AMSOIL INC.
Communications Department
The AMSOIL Building
925 Tower Ave.
Superior, WI 54880
letters@AMSOIL.com

THE COVER

We've updated our European Motor Oil line and added two new products, helping you increase sales in the European vehicle market.



European Motor Oil Refresh | PAGE 10



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From the President

Someone once asked me about what makes AMSOIL special and how is it that AMSOIL products can be better than products from giant corporations like Mobil* that have seemingly unlimited resources. After thinking about it for a while, I came to one conclusion – the culture of the company and the quality of the products are personal matters to me and were to Al before me. I take great pride in AMSOIL, and that sets the foundation for decisions that shape the entire company. I would not jeopardize our reputation on foolish or self-serving decisions. And I don't have to make short-term, quarterly decisions to satisfy shareholders that are bad for the company long-term. You will not find our values and decision-making criteria at public companies. They don't care about their products like I do. That is what makes AMSOIL special, and that is how we are able to compete and win. When

I taught AMSOIL University classes here in Duluth and Superior, I told the group to use this information to counter objections and I am saying it again now. Use these points at the right time to help you make sales.

In business, your brand and reputation are everything. For AMSOIL, we have identified three brand attributes that we take very seriously. First is *expertise* – we are experts in the field

of lubrication. Second is *excitement* – we are enthusiastic with the same drive as a startup company, and we participate in exciting activities like racing. Third is *principled/professional* – we hold ourselves to high standards and conduct business in a professional, upstanding way with high integrity. You, are our direct link to customers. You represent our brand and image. We can only do so much through advertising; the personal connection you make with customers is most important. And I am happy to say that together, we have built a very good reputation. We need to not only maintain that reputation, but also improve on it, and I am counting on you to help us do that. I like professionalism and it helps you sell. By being professional, you elevate yourself above your competitors and you will be looked to for help and solutions. You will earn more sales because customers will rely on you. Being a professional means different things to different people, so I am going to set a few expectations for being professional. Follow up and do what you say you are going to do. Never leave a customer hanging, and don't make commitments you cannot keep. Always be honest and genuine and do what is in the customer's best interest. Customers can tell if you are not. Be on time and dress up. Being on time and looking good are easy to do and show

respect for yourself, your brand and your customer. Be knowledgeable about your products. It is OK to say "I don't know" provided you follow up, but you should do your homework before connecting with a customer of any type. We provide a lot of resources in the Zone and are continually updating and adding new material. If you have not studied this material, you should. I guarantee it will not hurt and only help. And remember the five "Ps" of sales – Proper Preparation Prevents Poor Performance. Never give your customer a reason to leave. Customers are hard to get and should be cherished.

The AMSOIL brand and reputation are earned through the culmination of our actions. We must protect our image and show professionalism at every opportunity so that we continuously improve our very good reputation. It is critical to the success of AMSOIL.

Alan Amatzio
President & CEO

LETTERS TO THE EDITOR

GAS-TO-LIQUID TECHNOLOGY

I recently had a conversation with a prospective client who was asking me why gas-to-liquid technology oil is so superior to AMSOIL. While I maintained a professional and calm demeanor while conversing with this individual, he was bringing up a lot of information that he couldn't support. I did right off the bat tell him I've only seen it on the shelf and did not know anything about the product or the process in how it was made. Later, I tried to find out more about it but really couldn't find any information about it. Could you shed some light on this topic?

Thank you,

Ben Ilac

AMSOIL: *Thanks for your letter, Ben. Gas-to-liquid (GTL) technology is the process of assembling small, gaseous hydrocarbon molecules into larger molecules until they become liquid at standard temperatures and pressures. The liquids, in turn, can be adjusted to marketable products, including synthetic base oils.*

While there is promise in this area, GTL performance is not a certainty. Many GTL catalysts and processes generate highly paraffinic base oils that have less-than-desirable characteristics, including poor pour points, volatility and solubility. At the end of the day, GTL is a different method for producing synthetic base oils. The differences (good and bad) between GTL and more traditional synthetic base oils are likely very small compared to the differences in the quality of the lubricants' additive systems and how well the additives work with the base oils. For more information on this topic, visit the AMSOIL Blog at blog.AMSOIL.com and enter "GTL" in the search field.

PRODUCT LOOKUP GUIDE

The Product Lookup Guide is either broken or the redesign is terrible. Likely both. I tried to print the information on the site for a customer and received basically seven pages of nothing. What is there is in such small font it could have been printed on a business card!

The old Lookup Guide had good information displayed in a compact format

that was readable. When you printed it, you could select what information you wanted to print and could print all the information a customer needs to order oil and service their vehicle on a single piece of paper. It functioned fine; why did someone think it needed to be degraded?

It just follows all the problems with the "new improved" website. I have spent dozens of hours trying to do business on this new "improved" website over the past two months. The only "improvement" I have seen is in the greater number of hours I have to spend processing orders. I rarely can log on to the Dealer Zone without something crashing, hanging or not able to do what I could before. The search engine is pretty much useless, returning screens of unrelated links that are not relative to the search criteria, yet not finding what I needed. I have reported many of the problems, using up my time testing and debugging and documenting the issues of a system that should have been debugged before it was ever put into production.

Today I have not been able to submit a single order due to the website problems, even though I saw a notice that the "rollout is complete." If this is the quality that AMSOIL now accepts, I shudder to think what is happening to the oil products AMSOIL is currently producing. I also have to wonder what bugs and glitches are going on in the commission-check calculations. Neither thought warms my heart very much.

Rob Slotten

AMSOIL: *We're sorry you had some troubles, Rob. As we mentioned when we followed up with you in person after receiving your letter in late March, a few bugs are expected with an upgrade of this magnitude. Fortunately, we have addressed all the items you mentioned and the new websites have been a tremendous success for AMSOIL INC. and Dealers alike. Having our new e-commerce platform in place prior to stay-at-home orders being issued across North America was very fortuitous as consumers turned to online shopping to fulfill their needs. The new platform is what allowed us to implement the free-shipping promotions we ran through June, and they helped many Dealers achieve record sales.*

Overall, the new websites have been a resounding success. We will continue to make improvements based on sales and user data, always with the goal of improving user experience and increasing revenue.

Email letters to:
letters@amsoil.com

Or, mail them to:
AMSOIL INC.
Communications Department
Attn: Letters
925 Tower Avenue
Superior, WI 54880

Letters are subject to editing for length and clarity; please include your name, address and phone number. Unsigned letters will not be published.



Len Groom | TECHNICAL PRODUCT MANAGER, POWERSPORTS

Rust attacks engines during storage

Industry standards require a minimum amount of rust and corrosion inhibitors. We add more to Z-ROD® Synthetic Motor Oil.

One of singer/songwriter Neil Young's most critically acclaimed albums is titled "Rust Never Sleeps." Although the title was a nod toward the need to avoid artistic complacency, it can just as easily serve as a reminder that rust and corrosion are constantly trying to degrade our vehicles and equipment.

Practically everything eventually rusts or corrodes. Well, almost everything. Pure gold doesn't react with oxygen, meaning gold corrosion is extremely rare.

But our engines, vehicle frames, UTV suspensions, trailer hitches and other components rust or corrode unless we're diligent about maintenance.

While it's easy to spot rust or corrosion on the outside of a vehicle, it can also form inside the engine, which is especially destructive. That's what I want to talk about today.

First, however, what are "rust" and "corrosion?" What's the difference between the two?

Corrosion refers to the gradual breakdown of metal via chemical reactions with the environment. Metal reacts with oxygen and begins to deteriorate. Metal can also react with acidic gases, like the byproducts of combustion. Without intervention, the metal will eventually weaken and fail.

Rust is a type of corrosion that specifically affects iron and iron alloys, like those used to manufacture most internal engine parts. We're all familiar with the telltale reddish-brown scale that forms on iron over time. Once rust forms, it spreads quickly and wreaks havoc on your vehicles and equipment.

Certain conditions invite and hasten rust and corrosion. Folks who live where salt is applied to the roads in winter know this all too well. I bet the salvage yards around here are filled with more vehicles due to rust than engine or transmission failure.

Moisture also invites rust and corrosion. Leave your truck outside in the rain for a day or two. The next time you drive, don't be alarmed at the grinding noise when you first apply the brakes – it's just the brake pads scrubbing the veneer of rust off the rotors.

If rust forms inside your engine, it can flake off and populate the oil with contaminants. These tiny metal particles will circulate through the engine and scour bearings and other components before lodging in the oil filter. Eventually, the engine may suffer compression loss and reduced power due to piston-ring wear. The cam lobes can also wear, affecting valve lift and duration, which reduces power and efficiency.

Although most motorists don't realize it, motor oil doesn't naturally resist rust or corrosion. Special inhibitors must be added to the formulation that provide anti-rust and anti-corrosion properties.

AMSOIL Delivers Superior Rust Protection

In industry-standard testing, AMSOIL Z-ROD® completely prevented rust formation while a leading competitor did not.¹¹



¹¹Based upon in-house testing of AMSOIL Z-ROD 10W-40 and a leading competitor obtained on 7/25/2019 in ASTM D1748-10.

Because we use our daily drivers so frequently, rust and corrosion don't have time to form inside our engines, meaning most passenger-car/light-truck oils don't contain these additives. But, what about your hot rod, sports car or show car you drive all summer and store during winter?

Sitting inside a damp garage for months with motor oil in the sump contaminated with acidic combustion byproducts creates the perfect environment for rust. That's why we formulate Z-ROD Synthetic Motor Oil with potent additives that prevent rust. You can see how it performs compared to a leading competitor in the image above. The oil coats metal surfaces and provides a resilient layer of protection against rust. This is a perfect conversation starter for your customers who store their vehicles part of the year. Show them how not all oils prevent rust, then offer Z-ROD as the perfect solution.



Matt Erickson | DIRECTOR, TECHNICAL PRODUCT MANAGEMENT

Our products 'wow' the toughest critics.

It's not easy to impress the professionals who test motor oil for a living.

One thing I love about my job is the testing our team gets to do. It's fun coming up with ways to challenge our products and see how well they protect equipment. So, when new oil specifications are developed, meaning new performance tests are available, the whole development team here at AMSOIL gets excited.

After more than a year of delays, the new API SP and ILSAC GF-6 motor oil specifications took effect May 1. Their introduction continues the trend of more demanding specs to ensure today's motor oils are capable of protecting advanced engines.

Last month, I talked about the great results Signature Series Synthetic Motor Oil achieved in one of the new engine tests needed to meet API SP and ILSAC GF-6 requirements – the Sequence IIH Test. Today, I want to peel back the curtain to show you the rest of the story.

The Sequence IIH test is designed to measure viscosity increase and piston cleanliness, two important differentiators of motor oil performance. It subjects a candidate oil to 90 hours of use at 304°F (151°C) in a Chrysler* engine, much hotter than normal operation, to really challenge the oil. The intent is to screen oils for their ability to maintain protection under the severe conditions today's smaller, hotter-running turbocharged engines present. Simply put, it's designed to push the oil to its breaking point and separate those that can protect from those that can't.

As soon as the test stand was available, we sent samples of Signature Series to an independent lab that spe-

cializes in testing motor oils from all kinds of manufacturers. The lab techs do nothing but test oil all day, every day. They're accustomed to testing oils designed to just barely pass these performance tests, so when they heard AMSOIL Signature Series was going to be tested, their ears perked up. Many of them are gearheads who use AMSOIL products themselves, so they wanted to see the results.

As I said last month, the 90-hour test didn't even challenge Signature Series. Its viscosity increased only 0.1 percent and the pistons were so clean they looked practically new.

So, we told the lab to reassemble the engine and run the test again using the same oil, doubling the length of time on the engine and oil to 180 hours. As the test neared its conclusion, the lab manager said the techs were lined up in the test cell to watch the engine run...and some were even taking pictures.

Following the test, oil viscosity was measured and the pistons were rated for cleanliness. Even after **doubling the length of the industry-standard test**, Signature Series limited oil thickening to 49.6 percent – half the allowable limit of 100 percent for a single-length run – while delivering 40 percent cleaner pistons.¹ Needless to say, the techs were impressed.

How did the oil achieve such impressive results? We start with the best synthetic base oils available, which naturally resist chemical breakdown in the presence of extreme heat. We add a finely tuned, high-quality additive package designed to complement and

enhance the base oils' performance. Increased levels of highly active detergent and dispersant additives control contaminants and keep engine parts clean. The premium base oils, combined with the right balance of antioxidant additives, also control viscosity, helping the oil stay in grade despite prolonged exposure to brutal heat.

This adds up to premium engine protection in today's demanding engines. Signature Series protects vital components against wear in the toughest conditions, providing motorists peace of mind and the confidence to extend drain intervals if they choose.

When a competitor's oil easily passes an industry-standard test, they often reformulate to reduce cost and performance to where it barely passes the test. When we pass a test (or a double-length test), we continue to search for ways to increase protection even more because, for our customers, "good enough" doesn't cut it.

Our goal is to provide enthusiasts the absolute best motor oil on the market, and our team gets excited about the testing to prove it. It's not easy to impress the professionals who test motor oil for a living, but Signature Series delivered.

¹Based on independent testing of AMSOIL Signature Series 5W-30 in the Sequence IIH Engine Test (ASTM D8111), required by the ILSAC GF-6 and API SP specifications.

MUSCLE CAR MANIA: VOL. 1

Ford Mustang – America’s Pony Car

Our Muscle Car Mania series highlights some of the most iconic muscle cars in history. First up: the Ford* Mustang.*

The Mustang has been one of the most celebrated symbols of Americana for nearly six decades. Appearances in hit movies like “Gone in 60 Seconds,” “Bullitt” and “Goldfinger,” partnerships with racing legends like Carroll Shelby and numerous special editions have all helped set it apart as one of the ultimate enthusiast vehicles. Overall, it’s been one of Ford’s most successful models.

The Kick-Off

The Ford Mustang debuted April 17, 1964 at the World’s Fair at an affordable starting price of \$2,368. The model established a new variety of sporty, compact automobiles, fittingly known as pony cars, with strength and power that could garner respect on the track and the street. With its wide range of interior, exterior and powertrain options, the car appealed to many different lifestyles and quickly became a crowd favorite. In fact, Ford sold almost 7 times more than the company had originally projected.

The Mustang’s incredible popularity led Ford to start making upgrades

even before completing its first model year. Generators were swapped out for alternators, and the higher performance Challenger Special* 289 c.i. V8 (225 hp) and Challenger HiPo* 289 c.i. (271 hp) engine options were added. While all sales were reported as 1965 model sales, most enthusiasts refer to early production models as 1964 1/2 models and 1965 models.

Next In Line

A few short years after its initial launch, the Mustang was fitted with its first big-block 390 in 1967, escalating it to muscle-car status. Several generations of Mustangs rolled out with their own unique features and styles in the late ‘60s and early ‘70s, including the iconic Boss* 302 and Boss 429, featuring the 302 Windsor* engine, and the heart-pounding 429 race-inspired 375 hp V8, which replaced the 390, 427 and 428 big blocks. Ford also started introducing several special-edition Mustang models, including the Bullitt,* the California Special* and the Shelby GT* that dominated auto racing in the late ‘60s.

Rising gasoline prices in the early ‘70s shifted Ford’s focus toward fuel economy rather than performance. The Mustang II generation took a sharp turn from the heavy muscle-car style and instead made lighter models with reduced horsepower to keep in line with government fuel regulations.

The 1970s presented many challenges to the muscle-car market. EPA regulations limiting the use of lead in gasoline, the restriction of tailpipe emissions, an oil embargo and the introduction of import vehicles changed the landscape for a decade. It wasn’t until the mid ‘80s when the Mustang was finally fitted with an upgraded 5.0L that produced a respectable 210 hp. This was also when Ford used a roller cam to allow for the use of traditional passenger-car motor oil rather than the high-zinc oil required by its predecessors.

Mustangs Up To Date

The Mustang continued evolving throughout the years to adapt to changing markets and styles. Throughout the late ‘90s and



2000s the Mustang saw its 210 hp 5.0L retired for a 215 hp 4.6L, which received mild upgrades until it was replaced by the now legendary Coyote* 5.0L, which pumped out a whopping 412 hp. The Coyote is still offered today with an improved 460 hp, but smaller-displacement, turbocharged EcoBoost* offerings are gaining popularity.

More Muscle Needs More Protection

Many early Mustangs produced less than 300 hp. By contrast, 2020 Mustang engines can pump out up to 760 hp with a supercharged 5.2L. The massive amount of power in today's Mustang engines requires sophisticated lubrication.

Whether you have a classic Mustang or a modern powerhouse, AMSOIL has the specialized products you need to keep it in prime condition.

Early Mustang models were designed to use leaded gasoline. Did you know DOMINATOR® Octane Boost is an excellent lead substitute at the same treat rates in collector automobiles?

Mustang models prior to 1985 are equipped with flat-tappet cams. They require specialized oils like AMSOIL Z-ROD.®

Z-ROD Synthetic Motor Oil

- Specially engineered for classic and high-performance vehicles
- High-zinc formulation to prevent wear on flat-tappet camshafts and other critical engine components
- Proprietary blend of rust and corrosion inhibitors for added protection during long-term storage.

In 2007, Ford launched an updated Shelby GT500. This model, and all track-package Mustangs manufactured since, require specialized oil like Signature Series 5W-50.

Ford began using the Getrag* MT-82 manual transmission in 2011. AMSOIL Synthetic DCT Fluid is an excellent choice for this application.

100% Synthetic DCT Fluid

- Designed to protect high-tech dual-clutch transmissions during intense, high-heat operating conditions
- Provides the fast, smooth shifts drivers expect
- Use in transmissions found in 2011 and newer Mustangs¹

¹Based on review of the Getrag MT-82 manual transmission found in 2011, and newer Mustangs and Ford recommendation of DCT fluid for this application.

AMSOIL DELIVERS 'SHOCKING' PROTECTION IN DRAG RACING ENGINE

Preferred Customer and truck driver Paul Jordan of Butte, Mont. started racing a Junior Dragster at only 11 years old. At 14, he purchased a Plymouth* Duster,* which he's drag-raced since the early 2000s, competing in Montana, Idaho and the surrounding area.

"A friend of the family talked my parents into bringing me out to the racetrack one day and from that point on I was hooked," said Jordan. "I was only the second one in Montana to have a Junior Dragster at that point."

In 2007, Jordan built a Chrysler* 408 engine for his Duster. He used AMSOIL DOMINATOR® 15W-50 Synthetic Racing Oil (RD50) as the break-in oil and service fill.

As you would expect, the engine constantly operates under severe conditions. It makes about 550 horsepower and regularly hits 5,000-6,000 rpm.

Jordan estimates his Duster has made about 4,000 passes down the drag strip since 2007.

"I've won five championships over the years, so I've made a lot of passes down a lot of tracks," he said.

It uses six quarts of DOMINATOR Synthetic Racing Oil, a WIX oil filter as the primary filter and an AMSOIL Oil Filter as the secondary filter. Most notably, it has run on methanol fuel for the past three years, which is prone to attracting moisture and diluting the oil.

"If you switch to methanol, the rule is you should change oil every other race," said Jordan. Even so, he only changes oil once a year.

"There is no indication of any contamination," said Jordan. "I look

through it to see if there are any metal particles, but I've never had any. I probably could have put two years on the oil if I'd wanted to."

He recently decided to tear down the engine for the first time since building it 13 years ago to refresh it, which typically includes installing new bearings, piston rings and honing the cylinders. He also wanted to make some modifications to increase power.

"I expected to open the engine, pull the bearing caps off and see a couple of them pretty much worn out and on the verge of failure," said Jordan.

Instead, the inside of the engine looked clean and virtually free of wear.

"It was pretty surprising when we pulled it apart, popped the bearings out and they looked nearly brand new," said Jordan. "There's no ridge at all on the cylinder walls, which is incredible. And I used to spray it with nitrous, too. The cylinders are in unbelievable condition. There are a few scuff marks, but nothing you'd expect for something that's been abused for more than a decade. It was really shocking. And I can't believe how clean it was; there was no buildup anywhere."

Jordan said the crankshaft just needed to be re-polished. The car ran its best elapsed times at the drag strip in 2019, meaning it never lost power over the years.



After 13 years of drag racing, the bearings in Jordan's Chrysler 408 showed virtually no signs of wear.

"I could reassemble the engine as-is and go another 13 years," said Jordan. "I have no reason to believe, other than AMSOIL, that the engine lasted as long as it did. I use AMSOIL in everything I own. I use it in my pickup truck, my semi, my race car...if AMSOIL made shampoo, I'd use that, too."

Jordan adds that he used AMSOIL Super Shift® Racing Transmission Fluid (ART) in the TF727 transmission used in the car from 2003 to 2017 without a rebuild.

"I truly appreciate the fine lubrication products offered by AMSOIL, and you can expect my loyalty for many more years to come," he said.

AMSOIL EXCELS IN V-TWIN TORTURE TEST

- 2019 Harley-Davidson* Street Bob* • Milwaukee-Eight* 107 c.i. engine
- 1,000 miles on engine dyno • 300°F (149°C) oil temperature
- 421°F (216°C) max. cylinder temperature



Extreme heat is the biggest enemy for a powerful air-cooled V-twin engine, like those found on most Harley-Davidson* motorcycles. In fact, when designing its latest V-twin engine platform – the Milwaukee Eight* – Harley asked riders what they wanted from its newest engine. Two themes emerged: more power and less heat.

Extreme heat can ruin your ride

Some riders have complained about intense heat radiating from the engine while riding, particularly the rear cylinder, which doesn't receive as much airflow as the front cylinder.

Extreme heat not only challenges rider comfort, it challenges the engine.

If, for example, heat causes the piston to expand beyond acceptable tolerances, it can rub against the cylinder wall and cause scuffing.

Heat also causes some oils to thin and lose viscosity. The oil can become so thin the engine loses oil pressure, causing the oil-pressure gauge to bottom out.

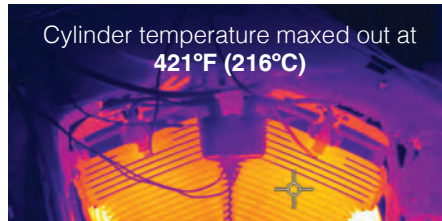
Riding conditions turn up the heat

V-twin heat becomes especially problematic when riding on hot summer days in conditions that limit airflow over the engine, such as in slow-moving parade or rally traffic. In extreme cases, the bike's electronic temperature controls shut down the bike if it gets too hot.

Oil-cooled Milwaukee-Eight engine

Harley introduced its Milwaukee-Eight engine in 2016 in part to reduce extreme heat and enhance rider

comfort. The engine uses a system of oil-filled cooling jackets surrounding the cylinders to reduce heat. The oil absorbs heat and carries it to a small oil cooler, where it dissipates into the atmosphere.



1,000-mile dyno test

To test AMSOIL Synthetic V-Twin Motorcycle Oil in the latest V-twin technology, we purchased a 2019 Harley-Davidson Street Bob equipped with a 107-c.i. Milwaukee Eight engine.

We instrumented the bike and rode it on the street to establish a baseline for "real-world" operation. This confirmed that low-speed, low-airflow conditions, like stop-and-go traffic, created the most challenging conditions.

We then installed the bike on the dyno in our mechanical lab and subjected it to a 1,000-mile test designed to simulate the worst-case conditions we saw on the street. One thousand

miles is enough to make 640 trips down Main Street in Sturgis.

Airflow over the engine was restricted to hold the oil-pan temperature at a steady 300°F (149°C). Cylinder temperature topped out at 421°F (216°C). In these conditions, the oil can quickly oxidize (chemically break down), which causes the viscosity to increase until it's out of grade and no longer provides the protection the engine requires.

Extreme heat no match for AMSOIL

Following the test, we chemically analyzed the oil to measure viscosity, oxidation, total base number (TBN) and wear metals. We also examined engine parts, in addition to the compensator, for wear or distress.

As shown, AMSOIL 20W-50 Synthetic V-Twin Motorcycle Oil (MCV) provided exceptional protection. The piston skirt contains virtually no wear, while deposits are minimal given the extreme conditions. In addition, the rings still move freely for maximum compression and power. The wear surfaces on the compensator are also in excellent condition, indicating the oil provided smooth, reliable shifts.

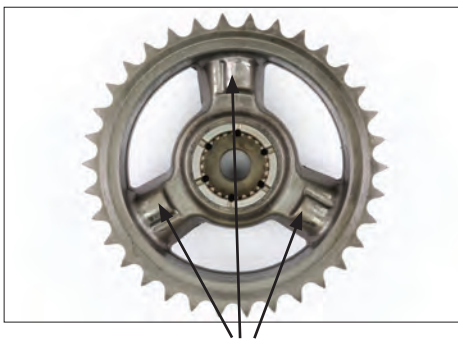
Oil analysis results are also

Rear-Cylinder Piston



The rings are virtually deposit-free and didn't stick for **maximum compression and power**. The skirt contains minimal scuffing for **long engine life**.

Compensator



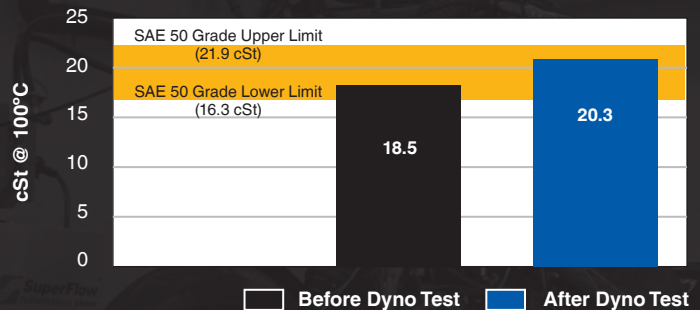
The wear surfaces show minimal distress, indicating the oil protected the compensator for **smooth, quiet shifts**.

impressive. The oil stayed within its viscosity grade despite the extreme heat. The oil limited oxidation and retained its TBN, which is a measure of its ability to fight corrosive acids. Finally, the oil limited wear metals to trace levels, indicating its excellent level of wear protection.

Use the new video

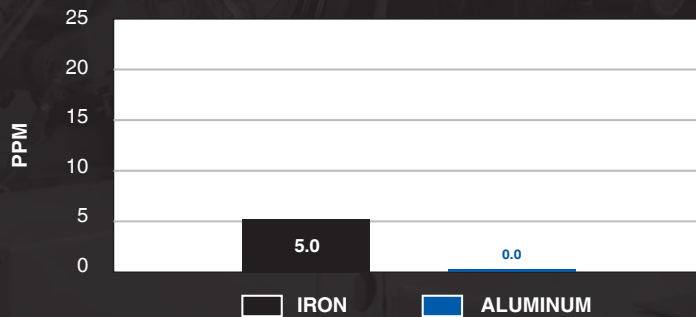
A video showing these results is available at [youtube.com/user/amsoilinc](https://www.youtube.com/user/amsoilinc). Just enter "V-twin" in the search field. Post the video on your social media accounts and send it to prospects and customers who have agreed to hear from you. It's an excellent way to pique interest and showcase the excellent performance of AMSOIL products heading into fall, when many bikers change oil prior to winter storage.

VISCOSITY



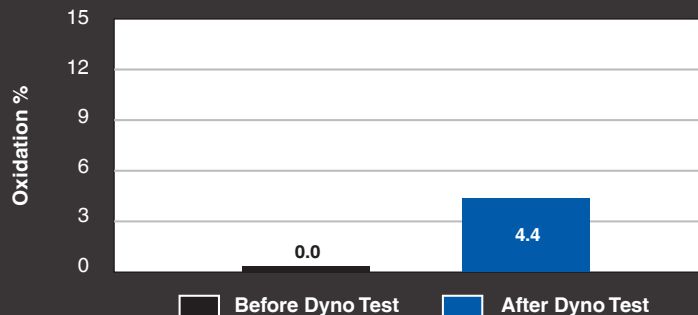
The oil maintained viscosity for **excellent wear protection**.

WEAR METAL



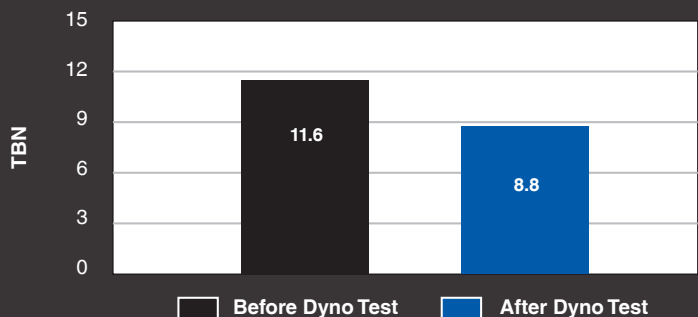
Only trace wear metals demonstrates the oil's **outstanding protection**.

OXIDATION



Oxidation is minimal, which allowed the oil to control deposits and **keep the engine clean**.

TBN



The high total base number (TBN) allowed the oil to **combat corrosive acids**.

European Motor Oil Refresh

We've revamped European Car Formula with a new look and feel, including renaming it 100% Synthetic European Motor Oil to indicate coverage of both cars and trucks. The product line features updated packaging and labels that better differentiate full-SAPS, mid-SAPS and low-SAPS formulas. These new packages will be introduced as existing inventory is depleted. To round out the line and provide sales opportunities where none previously existed, we also added two new 0W-20 viscosity products (AFE, EZT) that fill the unique specifications of certain European engines.

AMSOIL 100% Synthetic European Motor Oil (EFO, EFM, AEL, AFL)

continues to provide the same great performance.

- Engineered to meet European manufacturers' specifications
- Excellent protection for the unique needs of gasoline, diesel and hybrid European vehicles
- Fights sludge for superior engine cleanliness

Updated labels and packaging? Yes

Date Available? September (as current inventory is depleted)

Formulation change? No

New stock numbers? No

Price change? No

New SAE 0W-20 LS and SAE 0W-20 LS-VW European Motor Oils (AFE, EZT) have been added to the family and are recommended for European engines that require 0W-20 motor oil.

Two 0W-20 Products?

You may be wondering why we're introducing two separate 0W-20 products. While both products are the same viscosity, the specifications they carry are quite different and require unique engineering to meet the needs of these highly specialized engines. Both products offer the same benefits as all the other viscosities.

SAPS Identification

Many European vehicles available in North America feature gasoline and diesel engines with emissions systems that are highly sensitive to the SAPS (sulfated ash, phosphorus and sulfur) content of motor oil. SAPS are common oil additives that provide desirable performance properties, including detergency and protection against wear and oxidation. Different emissions systems require different SAPS levels – it's not one-size-fits-all. Our updated European motor oil line has labels that feature FS, MS and LS identification to help differentiate between full-SAPS, mid-SAPS and low-SAPS.

Complete Coverage

AMSOIL European Motor Oil meets and often exceeds strict European manufacturer specifications. Its shear-stable synthetic base oils and high-quality anti-wear additives provide outstanding protection in high-temperature conditions and deliver dependable performance throughout the long drain intervals recommended by European manufacturers.

Superior Engine Cleanliness

The excellent oxidation stability, heat resistance and detergency properties of AMSOIL European Motor Oil help keep

engines clean. It is designed to prevent sludge and varnish deposits, reduce oil consumption, extend engine life and provide maximum performance.

Excellent For Turbochargers

AMSOIL European Motor Oil has a robust composition that shields engines from the high temperatures produced by turbochargers. Its thermally stable oil formulation resists deposit formation and cools turbochargers. Its low pour point protects turbochargers against oil starvation in subzero temperatures and ensures a rapid return to appropriate oil pressure at startup.

For more insights into the European motor oil market, consult the European Motor Oil Dealer Sales Brief in the Dealer Zone (Learning Center>Dealer Sales Briefs).

Synthetic European Motor Oil Data Bulletin

| Stock # | Qty. | U.S. | Can. |
|----------------|-------------|-------------|-------------|
| G3395 | 25 | 4.10 | 5.60 |





ACTION PLAN

- When talking to prospects, don't lead with a technical discussion about oil chemistry; instead ask questions to help pique their curiosity – "Do you have a minute to hear about how AMSOIL products can help maximize your European vehicle's performance?"
- If they show interest, tie the specific lubricant benefits to the vehicle owner's areas of concern, including excellent engine and emissions-system protection.
- Point out that AMSOIL products are formulated to meet or exceed original equipment manufacturer (OEM) standards, and we offer a full range of viscosities and specifications to meet the specific needs of their European vehicles.





OIL TYPES EXPLAINED: SYNTHETIC, CONVENTIONAL, SYNTHETIC-BLEND & HIGH-MILEAGE

Motorists and enthusiasts have several options when buying motor oil. Synthetic, conventional, synthetic-blend and high-mileage motor oils all vie for their attention – and wallets. It helps to understand the different oil types available so you can better understand your prospects' buying motivations and talk confidently with them. Here's a rundown.

SYNTHETIC

- Best protection and performance
- Longest service life
- Best long-term value
- Best choice for modern engines

All should be familiar with the benefits of synthetic oil – and AMSOIL synthetic motor oil in particular. Their benefits derive from how they're made and the quality of the chemicals used to make them.

Synthetic base oils are chemically synthesized (i.e. built), unlike conventional base oils that are distilled from crude oil.

Refiners disassemble crude oil molecules to their fundamental components using various chemical reactions. Then, using only uniform molecules (typically ethylene), they build synthetic base oils from the ground up. What results is a pure base oil that doesn't contain the mishmash of irregular molecules found in conventional base oils.

The additives in the formulation responsible for fighting oxidation,

keeping parts clean, reducing friction and more are also typically higher-quality than those found in other oils, resulting in a better end product. As the graph shows, AMSOIL Signature Series Synthetic Motor Oil fights volatility better than other synthetic, conventional and high-mileage oils. This helps engines remain cleaner and last longer.

Original equipment manufacturers (OEMs) are increasingly relying on synthetics to achieve ever-tightening fuel-economy and emissions requirements. Modern low-viscosity oils such as 0W-20 and 0W-16 used to maximize fuel economy are made from synthetic base oils because conventional oils are incapable of providing the required performance.

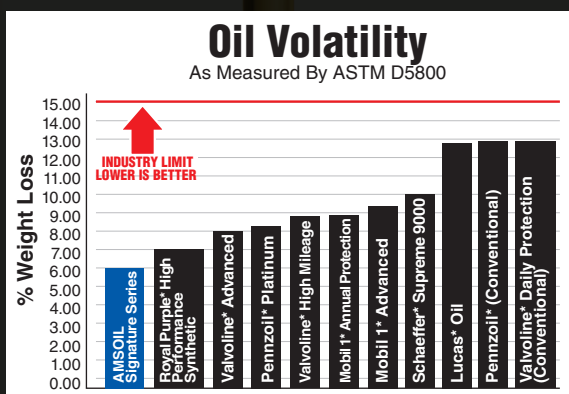
As engines and equipment continue to advance, use of synthetics will further increase.

When talking to prospects

- Validate the prospect's decision to use a full-synthetic oil, even if it's from another brand.
- Ask questions to identify their needs. *"Does your truck have a turbo? Is fuel dilution an issue in your direct-fuel-injected engine?"*
- Point out how AMSOIL is different. *"While Brand X makes a good oil, here's how we're different. We go above and beyond to exceed the toughest standards so enthusiasts can rest assured their engines are protected."*

Signature Series Helps Keep Valves Clean

AMSOIL fights volatility^u **38% better** than Mobil 1^{*} and **17% better** than Royal Purple,^{*} helping reduce oil consumption and keep valves clean.



^uBased on independent testing of AMSOIL Signature Series Synthetic 5W-20, Mobil 1 Advanced Synthetic 5W-20, Royal Purple High Performance Synthetic 5W-20 in ASTM D5800. Oils purchased Oct.-Nov. 2018. *All trademarked names and images are the property of their respective owners and may be registered marks in some countries. No affiliation or endorsement claim, express or implied, is made by their use.

CONVENTIONAL

- Most widely used type of motor oil
- Provided decent protection in many applications for years, but modern engines are leaving them behind
- Shorter service life than synthetics
- Lowest initial price

As previously mentioned, conventional base oils are distilled from crude oil, which contains a mishmash of elements such as sulfur, nitrogen, oxygen and various metals.

Many materials inherent to crude oil must be removed through refinement to increase the oil's usability. Refiners do this by applying heat, pressure and other catalysts to separate crude oil into different groups, called fractions. Further processing results in many of the products we use today, such as kerosene, gasoline, diesel fuel and lubricating oils used to make conventional motor oil.

Conventional oils have limitations. Distillation cannot completely remove impurities detrimental to lubrication, such as waxes that solidify in the cold and unstable molecules that evaporate in high heat, leading to oil consumption and deposits.

Modern turbocharged, direct-injected engines are leaving conventional oils behind. They run hotter, create more contaminants and require oils that meet tougher performance requirements than ever before.

When talking to prospects

- Ask about the prospect's vehicle. Is it turbocharged? Direct-injected? *"Many enthusiasts swear by synthetic oil in turbocharged engines due to the severe heat. What do you think?"*
- Lower price matters? Suggest AMSOIL OE Synthetic Motor Oil or AMSOIL Heavy-Duty Synthetic Diesel Oil as higher-quality replacements at a lower price than our top-tier oils.
- Know when to walk away. Is the motorist buying the cheapest oil possible because he doesn't care about protecting his old car? He's unlikely to consider AMSOIL products.

SYNTHETIC-BLEND

- Mix between synthetic and conventional base oils
- Stepping-stone oil from conventional to synthetic
- No standards for minimum amount of synthetic base oils required
- Mid-level price

Some motorists like the improved protection and performance of synthetic oil, but balk at the higher initial price. Many oil manufacturers

formulate a synthetic-blend oil for these motorists. It's designed to provide better wear protection, engine cleanliness and cold-flow than conventional oils at a lower price.

Unfortunately for motorists, there are no industry specifications or regulations that define the minimum percentage of synthetic base oils for a synthetic-blend to be classified as such. It could contain 1 percent synthetic base oils, 25 percent or more. There is no telling, meaning performance can vary widely.

When talking to prospects

- Validate the motorist's buying decision. Stepping up to a synthetic-blend shows they value protection.
- Help them see a potential need for even greater protection.
- *"Some motorists I talk to wonder exactly how much 'synthetic' is in their synthetic-blend. Is that the case with you?"*

HIGH-MILEAGE

- Fastest-growing oil type
- Often a synthetic-blend
- Typically recommended for engines with 75,000 miles (120,000 km) or more
- Contain special additives

As engines age, seals can dry out and parts can wear if motorists haven't been using a premium synthetic oil. High-mileage oils contain extra additives designed to condition aging seals to help prevent leaks. Their viscosities also fall on the upper end of the spectrum to help seal the widening clearances between metal parts that are wearing over time. Though most are synthetic-blend oils, full-synthetic oils designed for high-mileage engines are increasingly entering the market.

Often, the buyer's motivation for using a high-mileage oil is similar to motorists who buy synthetic-blend oil – a desire for better protection, but at a lower price than top-shelf synthetics.

When talking to prospects

- As with synthetic-blend users, validate their decision to step up to better protection compared to conventional oil.
- Help them see a potential need for even greater protection.
- *"Some motorists I talk to question whether synthetic-blend oil is ideal for today's more demanding engines. What's your take?"*

KEY POINTS

- While synthetic oil provides the best protection and value, some motorists aren't ready for our top-tier products. Understand your prospect's buying motivations before making recommendations. As the saying goes, "Prescription without diagnosis is malpractice."
- Don't lead with technical features that likely will go over the prospect's head.
- Ask questions to uncover what your prospect wants in a motor oil. The best protection? The lowest initial price? Something in between?
- Don't disparage the competition. Doing so is tantamount to disparaging the prospect's purchasing decision, which will raise his or her defenses.
- Use AMSOIL performance tests ([AMSOIL.com/performance-tests.aspx](https://www.amsoil.com/performance-tests.aspx)) to support the sales process, but avoid leading with test results.

September Close-Out

The last day to process September orders in the U.S. and Canada is the close of business on Wednesday, Sept. 30. Individual telephone and walk-in orders will be processed if initiated by the close of business. Internet and fax orders will be accepted until 3 p.m. Central Time on that day. All orders received after these times will be processed for the following month. Volume transfers for September business will be accepted until 3 p.m. Central Time on Tuesday, Oct. 6. All transfers received after this time will be returned.

Holiday Closings

The Edmonton and Toronto distribution centers will be closed Monday, Oct. 12 for Thanksgiving Day.

WHITE CAMO HAT

White camo hat with adjustable Velcro back. One size fits most. Camo pattern may vary.

Stock# G3660



ORANGE/CAMO HAT

Orange hat with camo bill. Velcro closure.

Stock# G3659



CAMO MESH HAT

Green camo hat with mesh back and adjustable Velcro closure. One size fits most. Camo pattern may vary.

Stock# G3661





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