

AMSOIL[®]

MAGAZINE

SEPTEMBER 2022



New Viscosities Deliver
Upgraded **Protection** for
More ATVs and UTVs



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FEATURES

- 6 New Viscosities Deliver Upgraded Protection for Can-Am* and Honda* ATVs and UTVs
- 8 The Coolant Life

DEPARTMENTS

- 3 From the CEO
- 5 Tech Talk

ADVERTISEMENTS

- 4 Protection and Dependability
- 10 Why Buy Signature Series?



THE COVER

New 10W-30 and 5W-40 viscosities expand the reach of the AMSOIL Synthetic ATV/UTV Motor Oil line.



From the CEO

When I assumed ownership of AMSOIL, we began reshaping the company to enable seamless operation when people in key leadership roles are absent. Shortly after that work began, I had to take a 10-month leave, which highlighted the importance of this project. We call this work “succession planning,” and it applies at all levels of the company. As AMSOIL continues to grow, it is crucial that we identify the people who can step in to perform a job when another team member is missing for any reason or length of time.

That applies to me as well. We must have a structure for AMSOIL that allows the company to run in my absence while remaining true to my vision. With that in mind, I am appointing Bhadresh Sutaria President of AMSOIL effective Sept. 1, 2022. In his new role, Bhadresh will oversee daily operation of the company. Bhadresh has been helping with daily operation of the company as AMSOIL CFO for the last six years. He brings strong prior experience in general management, finance and strategy in both public and private companies.

I will remain AMSOIL CEO and assume the position of Chairman of the Board, overseeing the activities of our newly formed Board of Directors. Dean Alexander will remain as a member of the board.

I am not going anywhere, and I will continue writing this column in *AMSOIL Magazine*. These changes are to help us provide clear organizational succession to ensure my vision for AMSOIL is fulfilled whether I am here or not. This will also allow me to focus on further development of that vision and bringing forward exciting growth opportunities that will help make us even stronger.

As an AMSOIL Dealer, you won't notice a difference. I am sharing these details with you to reinforce a few key points:

1. AMSOIL is prepared to mitigate difficult or unexpected circumstances. You are backed by an organization that puts a premium on preparedness, professionalism and doing whatever's necessary to protect our Dealers, customers and employees.

2. AMSOIL is being structured to preserve my vision for the company, which includes maintaining an opportunity for people to earn money selling AMSOIL products.

3. AMSOIL is strong and growing. Freeing my time to focus on additional growth strategies will help us accelerate that growth. I want to find more ways to help you sell more products, gain more market share and earn more money.

Strong. Growing. Prepared. Agile. The best products. That is what you get with AMSOIL, and they are key elements of my formula for ongoing success.

Alan Amatuzio
CEO & Board Chair

PROTECTION AND DEPENDABILITY

Keep your firearms in top working condition with AMSOIL Synthetic Firearm Lubricant and AMSOIL Firearm Cleaner.

AMSOIL SYNTHETIC FIREARM LUBRICANT

- **Keeps** firearms working properly for generations
- **Helps** prevent blockage, jams and wear
- **Outstanding** protection in hot and cold climates

AMSOIL FIREARM CLEANER

- **Effectively** cleans fouling and powder residue
- **Helps** reduce misfires and increase reliability
- **Protects** against corrosion





Mike Nelson | SENIOR PRODUCT DEVELOPMENT ENGINEER

Turbochargers put the “power” in powersports

Like the auto market, forced induction is reshaping powersports equipment.

A time-tested approach to having more fun with your powersports equipment is to add horsepower and torque while cutting weight. But, how do you do that while also having excellent range and lower environmental impact? Forced induction.

At the heart of most powersports equipment is an internal combustion engine. Just like in the automotive industry, powersports original equipment manufacturers (OEMs) always seem to want more power without sacrificing efficiency or increasing emissions.

Turbochargers are emerging as an effective way for OEMs to provide the powerful, hang-on-for-dear-life machines enthusiasts want while meeting government regulations. They're taking a page out of the automakers' playbook, who have been using turbos for years to boost power and fuel efficiency.

Let's take a look at a few examples. The Arctic Cat® ZR 9000 Thundercat® relies on a turbocharged 998-cc four-stroke engine to make more than 200 hp, making it the fastest production snowmobile on the market. In the two-stroke realm, the Ski-Doo® Summit X Turbo® 154 puts down 180 hp at up to 8,000 feet elevation. This makes up for power loss due to decreased oxygen when you're riding in the mountains.

On four wheels, we have the Can-Am® Maverick® X3 DS Turbo RR, which produces 18 lbs. of boost to help propel it to 60 mph in 4.3 seconds. It maxes out at 195 hp.

These are impressive stats that the OEMs couldn't achieve nearly as efficiently without a turbocharger. Not

bad for a device that's essentially nothing more than an air pump. They work by using exhaust gases to spin a turbine that drives a compressor. This forces air into the combustion chamber. When you add more air, you can add more fuel, and that adds up to more power.

As with automotive turbocharging, the technology has drawbacks. Turbos increase heat, which oxidizes oil and causes it to break down sooner. Oil that has oxidized gets thicker, making it harder to circulate, and impairs its ability to protect against wear and deposits.

The turbo bearings can be sensitive to deposits in these units if the oil isn't up to the challenge. Hitting the throttle as you ascend a sand dune or hill on a scorching summer day, then backing off as you descend a hill or approach a corner in the trail, creates severe heat cycles that invite deposits, known as turbo coking. Shutting down a hot engine and letting the hot oil bake onto the bearings has the same effect.

Heavy turbo deposits reduce performance and life, potentially leading to money wasted on repairs. In addition, turbos can spin up to 200,000 rpm, which creates tremendous friction and additional heat. Again, it's up to the oil to cool and lubricate the turbo bearings and shaft to ensure your expensive machine is protected.

At AMSOIL, we formulate our products for the worst-case scenario, such as a 195-hp UTV flying down a trail, through the mud and over the hills on a hot summer day. In fact, those were the conditions to which we subjected a 2021 Can-Am Maverick X3 DS Turbo RR before testing it in our mechanical lab.

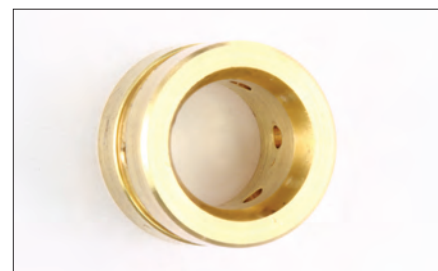
We wanted to gather real-world data on severity so we could push the UTV even harder in our lab testing. During our pre-test shakedown, oil temperature maxed out at 212°F (100°C). In our lab test, however, oil temp reached 244°F (118°C), showing the test's severity.

While we looked at engine and transmission protection overall, one area on which we focused was turbo protection. How did AMSOIL Formula 4-Stroke® Powersports Synthetic Oil (AFF) perform? As the image of the turbo bearing shows, flawlessly. Check out the full results in the April edition of *AMSOIL Magazine*. You can also watch a short video of the test at YouTube.com/AMSOILINC by entering “UTV” in the search field.

Turbocharging is the latest technology the OEMs are using to provide the power you want out of your machine. In the years ahead, I'm sure they'll develop even more technologies that challenge motor oil. We'll be ready when they do.



UTV TURBO BEARING 100 HRS. EXTREME DYNO TESTING



The bearing is clean and in like-new condition despite extreme heat and stress.

New Viscosities Deliver **Upgraded Protection** for More ATVs and UTVs

Available in early September, new AMSOIL 10W-30 Synthetic ATV/UTV Motor Oil and 5W-40 Synthetic ATV/UTV Motor Oil provide expanded protection for hard-working and performance ATVs and UTVs, including those made by Honda,* Can-Am* and Kawasaki.*

Protection in Tough Conditions

ATVs and UTVs are used to tackle any task or terrain, like pulling trailers, hauling gravel, herding livestock, plowing snow, powering through mud and more. This hard work and aggressive riding place a lot of stress on the engine. It's also common to modify UTVs and ATVs with accessories designed to increase power and productivity, like roof and door panels, a plow, a winch, skid plates and other accessories. These upgrades allow riders to do more, but they also add weight and increase the severity of operation. Added weight equals added heat, and heat causes standard-service lubricants to break down sooner.

AMSOIL Synthetic ATV/UTV Motor Oil is engineered to withstand these severe operating conditions by delivering reserve protection against heat. It provides reliable wear protection and aids in cooling shrouded engines, so you can feel confident that your machine is protected when tackling tough jobs around your property or riding aggressively on the trail.

All-Weather, All-Climate Performance

AMSOIL Synthetic ATV/UTV Motor Oil performs in both cold and hot temperature extremes. It remains fluid in sub-zero temperatures to provide excellent startup protection, and it resists thinning due to extreme heat and mechanical shear for superior protection in hot conditions.

Two New Viscosities

Like the rest of the AMSOIL Synthetic ATV/UTV Motor Oil lineup, the new 10W-30 and 5W-40 viscosities were developed specifically for demanding chores and terrain. Their advanced synthetic technology resists oxidation and protects against extreme heat to help prevent sludge and varnish. AMSOIL 5W-40 Synthetic ATV/UTV Motor Oil (AUV54) provides excellent cold-flow ability for quick starts in cold temperatures. AMSOIL 10W-30 Synthetic ATV/UTV Motor Oil (AUV30) provides exceptional protection during cold starts and high rpm. These severe-service formulations allow riders to confidently and safely push their ATVs and UTVs to the limit.

- **Outstanding protection** when used for racing, hauling, plowing or conquering tough terrain
- **Formulated** without friction modifiers to promote smooth shifting and positive clutch engagement
- **Fights** rust and corrosion
- **All-season** formula performs in extreme heat and cold
- **Wet-clutch** compatible

Premium Alternatives

Unlike OEMs who focus on making vehicles, we focus on one thing: developing premium lubricants and products that are purpose-built to protect the machines that use them. AMSOIL 10W-30 Synthetic ATV/UTV Motor Oil and AMSOIL 5W-40 Synthetic ATV/UTV Motor Oil have been developed to offer cost-effective, high-performance alternatives to Honda and Can-Am lubricants of the same viscosities. AMSOIL Synthetic ATV/UTV Motor Oil is Warranty Secure™ and will not void your ATV or UTV warranty.



AMSOIL 5W-40 Synthetic ATV/UTV Motor Oil

U.S. PRICING			U.S.	U.S.	U.S.	U.S.
Stock #	Units	Pkg./Size	Wholesale	P.C.	MSRP	Catalog
AUV54QT -EA	1	Quart	11.55	12.29	16.09	17.09
AUV54QT -CA	12	Quarts	131.85	139.15	191.20	202.25
CANADA PRICING			Can.	Can.	Can.	U.S.
Stock #	Units	Pkg./Size	Wholesale	P.C.	MSRP	Catalog
AUV54QTC-EA	(1)	946-ml. Bottle	15.35	16.19	21.29	
AUV54QTC-CA	(12)	946-ml. Bottles	175.40	184.20	254.30	

AMSOIL 10W-30 Synthetic ATV/UTV Motor Oil

U.S. PRICING			U.S.	U.S.	U.S.	U.S.
Stock #	Units	Pkg./Size	Wholesale	P.C.	MSRP	Catalog
AUV30QT -EA	1	Quart	10.50	11.19	14.59	15.59
AUV30QT -CA	12	Quarts	119.85	126.45	173.80	184.90

Not available in Canada.



Applications

- Use AMSOIL 10W-30 Synthetic ATV/UTV Motor Oil (AUV30) in ATVs and UTVs that require a 10W-30 oil, including those made by Honda.*
- Use AMSOIL 5W-40 Synthetic ATV/UTV Motor Oil (AUV54) in ATVs and UTVs that require a 5W-40 oil, including those made by Can-Am* and Kawasaki.*

Check Out The Rest of the AMSOIL ATV/UTV Lineup

Synthetic ATV/UTV Motor Oil (AUV40, AUV50)

- **Outstanding protection** when performing demanding chores and tackling tough terrain
- **Consistent** clutch feel
- **Superior** all-weather performance
- **Wet-clutch** compatible

Synthetic ATV/UTV Transmission & Differential Fluid (AUDT)

- **Outstanding protection** when performing demanding chores and tackling tough terrain
- **Protects** heavily loaded, high-torque gears
- **Superior** all-weather performance

Synthetic ATV/UTV Powertrain Fluid (AUPT)

- **Protects** heavily loaded, high-torque gears
- **Designed** to prevent clutch chatter
- **Flexible** easy-pack for clean, fast installation
- **High-performance** alternative to Polaris* Demand Drive Fluid* and Polaris AGL Synthetic Gearcase Lubricant and Transmission Fluid*

ATV/UTV Oil Change Kits (PK1, PK2, PK3, CK1, CK2, CK3)

- **Combine** everything needed to perform an AMSOIL oil change on the most popular Polaris or Can-Am ATV/UTV models in one convenient package.



**ATV/UTV Oil Change Kits featuring AMSOIL 10W-30 Synthetic ATV/UTV Motor Oil and 5W-40 Synthetic ATV/UTV Motor Oil will be introduced within the upcoming year.



THE COOLANT LIFE

Coolant is a hard-working fluid. Heat produced by combustion must be removed to prevent overheating. Some of that heat escapes with the exhaust and some is absorbed by the engine block. But to keep heat within the engine's operating temperature range, coolant must be pumped through the engine to the radiator, where excess heat can be dissipated.

Besides aiding engine-temperature regulation, a quality coolant will also protect against:

- **Corrosion** that damages metal components.
- **Scaling** that interferes with heat transfer.
- **Cavitation** and pitting that damage cylinder liners (heavy-duty applications).

How important is it?

Coolant-system issues account for about 40% of engine problems, often due to motorists neglecting to maintain their coolant. It's easy to see why – coolant is a long-drain-interval product. With service intervals of around five years (and longer in heavy-duty applications), it's not top-of-mind. Compare that to engine oil, which is changed at least yearly and sometimes more often.

Coolant consists of a base (typically ethylene glycol or propylene glycol) mixed with additives and water. The base is primarily responsible for keeping the engine from turning into a block of ice in winter and a geyser in summer. Mixing water with coolant raises boil-over protection to around 265°F (129°C) and freeze protection to around -34°F (-37°C). The additives guard against corrosion, cavitation and scaling, while water effectively removes heat from the engine.

Coolant neglect leads to all kinds of problems, particularly if using inexpensive conventional green coolants found at almost every retailer. For example, corrosion occurs when an imbalanced coolant chemically reacts with metallic surfaces, forming reddish deposits that can appear as sludge or slime. Fouling can occur from contamination of the cooling system by microorganisms that create sludge and fouled surfaces with byproducts of rust or corrosion. As coolants age, the chemical protection of the metal surfaces breaks down and sludge accumulates.

The additives in green coolants use inorganic-acid technology (IAT), which relies exclusively on inorganic salts such as nitrites, phosphates and silicates for protection. Formulating exclusively with inorganic salts has drawbacks. They deplete rather quickly and can lead to scale buildup and sludge if maintenance is neglected.

One solution is to formulate the coolant using organic-acid technology (OAT). These coolants don't contain phosphates, silicates or other inorganic salts, virtually eliminating problems associated with conventional green coolants. They also last longer.

Another solution is hybrid organic-acid technology (HOAT). These coolants rely heavily on organic acids, but strategically use some inorganic salts to take advantage of their protective properties. A properly formulated HOAT coolant delivers long service life and excellent protection. Think of it as a belt-and-suspenders approach to protection.

Whichever coolant you use, it's best to flush the system about every five years to maintain its health.

Some do-it-yourselfers simply place a drain pan under the radiator and open the petcock. While it's better than nothing, this quick-and-dirty coolant service only removes about half the fluid.

Heavy-duty diesel operators often use supplemental coolant additives (SCAs). They're designed to be added to the coolant about halfway through the service interval, replenishing the additives that have depleted.

Coolant-system issues account for about **40% of engine problems**, often due to motorists neglecting to maintain their coolant.

That sounds like a decent solution, but SCAs have drawbacks. For starters, they're a hassle. The operator must test the coolant using test strips and match the color of the strip to a chart. The risk is adding too much SCA, which can cause additive "dropout." This occurs when the additives separate from the coolant base and form sludge and slime that plug coolant passages. Too much SCA can also lead to scale buildup, which inhibits heat-transfer.

Fortunately, there's a better way. You can use a high-quality coolant that doesn't require the hassle of SCAs and does a better job of fighting common problems like scale, sludge and slime.

AMSOIL provides such a coolant: Heavy-Duty Antifreeze & Coolant (ANTHD). It uses a HOAT formulation that delivers excellent protection against overheating and corrosion for up to 1 million miles (1,609,344 km), 20,000 hours or 8 years, whichever comes first, and it doesn't require the hassle of adding an SCA.

For passenger car/light-truck owners, AMSOIL Passenger Car & Light Truck Antifreeze & Coolant (ANTPC) features an OAT formulation that eliminates additive drop-out, scaling and other issues inherent to conventional coolants. It's pre-mixed 50/50 with high-quality water and is compatible with all ethylene and propylene coolant colors.

AMSOIL Low Toxicity Antifreeze & Engine Coolant (ANT) is the solution for those who want a low-toxicity, biodegradable coolant. Its HOAT formulation delivers excellent protection for up to 150,000 miles (241,000 km) or 5 years, whichever comes first, in passenger cars and light trucks. In heavy-duty applications, it lasts 1 million miles (1,609,344 km), 20,000 hours or 8 years, whichever comes first. It's compatible with all ethylene and propylene coolant colors.

The coolant system is critical for vehicle performance and longevity. If it's been a while, now is an excellent time to give your system a flush and a fresh start with an AMSOIL coolant.



WHY BUY SIGNATURE SERIES?

DO YOU DRIVE IN HOT TEMPERATURES?



AMSOIL is barely challenged by the industry-standard testing, demonstrating only a **0.1% viscosity increase**. Even when the **test length is doubled**, AMSOIL delivered **twice the viscosity control** required by the standard.⁴

50 percent more detergents⁵ to help keep oil passages clean and promote oil circulation. Provides **90 percent better protection** against sludge.⁶

DO YOU HAVE LONG COMMUTES?



28 percent more acid-neutralizing power⁸ than Mobil 1,^{*} helping engines stay cleaner, longer.

Reserve protection so you can go up to **25,000 miles**, 700 hours of operation or one year between oil changes, whichever comes first.

DOES YOUR VEHICLE HAVE A TURBOCHARGER?



72 percent better turbocharger protection than required² by the GM dexos1[®] Gen 2 specification.

Achieved **100 percent protection** against low-speed pre-ignition (LSPI).³

DO YOU TOW OR HAUL?



75 percent more engine protection against horsepower loss and wear.⁷

DO YOU DRIVE IN COLD TEMPERATURES?



AMSOIL synthetic motor oils make **cold-weather starting 39% easier** than conventional motor oils.⁹

DO YOU WANT EXTRA ENGINE PROTECTION?



Far superior wear protection compared to the competition – kept bearings looking like new after 100,000-mile test.¹

¹Testing conducted in an independent lab using AMSOIL Signature Series 5W-30 Synthetic Motor Oil and a leading synthetic-blend 5W-30 motor oil in Ford F-150 trucks with 3.5L twin-turbo engines. ²Based on independent testing of AMSOIL Signature Series 5W-30 in the GM turbo coking test. ³Based on zero LSPI events in five consecutive tests of AMSOIL Signature Series 5W-30 Motor Oil in the LSPI engine test required by the GM dexos1 Gen 2 specification.

⁴Based on independent testing of AMSOIL Signature Series 5W-30 in the Sequence IIIH Engine Test (ASTM D8111), required by the ILSAC GF-6 and API SP specifications, vs. AMSOIL OE Motor Oil. ⁵Based on independent testing of AMSOIL Signature Series 5W-30 in the ASTM D6593 engine test for oil screen plugging as required by the API SN specification. ⁶Based on independent testing of AMSOIL Signature Series 0W-20 using the ASTM D6891 standard test. ⁷Based upon independent testing of Mobil 1 Annual Protection Full Synthetic 5W-30 and AMSOIL Signature Series 5W-30 in ASTM D2996. Oils purchased July 2020. ⁸Based upon testing of AMSOIL Signature Series 5W-30 and a national conventional brand 5W-30 in the ASTM D5293.



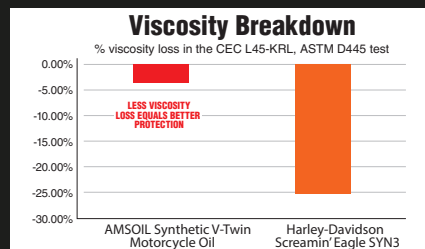


EVERYTHING YOUR HARLEY* NEEDS, INCLUDING BETTER PROTECTION

Riding season will soon be winding down across much of the U.S. and Canada. Make sure your customers change their oil and filters to ensure their bikes are **protected against corrosion during storage and ready to roll next spring**. AMSOIL V-Twin Oil Change Kits include everything needed to perform an AMSOIL oil change in one convenient package. To find the right kit, use the Motorcycle Product Guide at AMSOIL.com/AMSOIL.ca.



AMSOIL V-Twin Motorcycle Oil resists viscosity breakdown **6X better** than Harley-Davidson* SYN3* for **improved protection** against compensator and transmission gear wear.^{BB}



- AMSOIL V-Twin Oil Change Kits include...**
- 4-5 quarts of AMSOIL 20W-50 Synthetic V-Twin Motorcycle Oil (MCV)
 - 1 chrome or black AMSOIL Motorcycle Oil Filter (EAOM134/EAOM134C)
 - 1 drain-plug O-ring

^{BB}Based on testing of AMSOIL 20W-50 Synthetic V-Twin Motorcycle Oil purchased on 3/19/19 and Harley-Davidson Screamin' Eagle SYN3 purchased on 3/19/19 in the CEC L45-KRL, ASTM D445 test. *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.

Check out the Motorcycle Product Guide at AMSOIL.com/AMSOIL.ca to find the right kit for your Harley-Davidson.*



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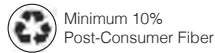


WE HONOR



(Discover in U.S. only)

Cooling systems require regular maintenance, yet they're often overlooked. Are your customers up to speed on what's required to keep the equipment maintained? Show them the solutions AMSOIL coolants provide.
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