AMSOIL MAGAZINE

▸ PREFERRED CUSTOMER EDITION

AUGUST 2013

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From the President's Desk

If I had to identify a single theme we could take away from our 40th Anniversary Convention it would have to be opportunity. Synthetic lubricants are by far the fastest-growing segment of the lubricant market, and AMSOIL Dealers are well-positioned to capture more sales. Three Convention presentations given by our corporate staff detailed ideal targets for those sales.

The passenger-car market, of course, is steep with opportunity. We don't have to elaborate much on that. Advancements in engine design are placing more stress on motor oil, and auto manufacturers are calling on synthetics as factory fills. The move to lower-viscosity oils to meet fuel economy targets and longer drain interval recommendations are helping steer this trend. The demand for synthetic transmission fluid will also continue to increase, and Dealers are well-armed with AMSOIL technology to satisfy all segments of that market.

A recurring message was also driven home. With the dramatic shift from the do-it-yourself market to the do-it-for-me market it is absolutely imperative that AMSOIL Dealers focus energy on installers. All Dealers should have at least one installer they can send their customers to. If we don't move in concerted fashion to capture this market, we will lose ground. I couldn't feel more strongly about this, and we are working corporately on programs to help Dealers in this area.

The diesel market was also identified as an area for explosive growth. Small fleets, in particular, are ideal AMSOIL accounts. These people run tight ships, and reducing fuel and maintenance costs has huge impact on their profits. Along those lines, diesel pick-up truck owners place great reliance on their vehicles for both work and play, and they are more likely than most to appreciate the benefits of superior lubrication.

The powersports market remains a significant market for us, as well. Like diesel pick-up truck owners, powersports enthusiasts appreciate any measure they can take to increase performance and protect their investments. These are do-it-yourself types who readily understand the value AMSOIL Dealers bring to the table.

The most significant take-away from the Convention may have been a presentation delivered by executive vice presidents Alan Amatuzio and Dean Alexander. Together, they detailed the many ways in which the company is investing in our future. Our new mechanical testing lab tops the list. The new lab encompasses more than 8,500 square feet of the AMSOIL Center and features three 480-square feet dynamometer cells capable of housing a minimum of two dynamometers each. We now have the ability to perform virtually all critical engine trials in-house, which will allow for faster results, more flexibility, greater control over test conditions and more overall testing. We have never been in better position to explore formulations that will further solidify our position as the leader in lubrication technology.

The company is also investing significantly in our chemical lab, our marketing efforts, staffing and a software program designed in-house to help AMSOIL Dealers specifically run their businesses more efficiently.

And a few miscellaneous Convention observations:

I was struck once again by the number of Dealerships that are now being managed by second-generation Dealers. These Dealers inherited large, healthy AMSOIL businesses, and I was happy to see each of them engaged in their businesses and eager to make them even more profitable. It reinforces a point I have been preaching for years. I hope all Dealers realize that the investments made in an AMSOIL business today will pay dividends far into the future.

Virtually to a person, the staff at the Duluth Entertainment and Convention Center thanked me personally for bringing our AMSOIL Dealers to town. Never, they said, have they had a group so respectful and polite. I was extremely proud to hear that, and I thank each and every Dealer who attended.

Finally, I had to chuckle when one enthusiastic Dealer approached me at the President's Dinner. He introduced himself and drew my attention to the clothes he was wearing. He was really quite dapper. The sport coat, he explained, was a first-time experience for him. Not even his wedding day gave rise to a need of this nature. His wife, no doubt, is an extremely understanding woman. I have a feeling they are right on track to make an impact with their AMSOIL business.

A.J. "Al" Amatuzio
President and CEO, AMSOIL INC.

Keep it Clean

Keeping Engines Clean with AMSOIL

Though conventional motor oil quality has improved over the past 30 years, this progress is also offset by emission-reduction strategies, including variable valve timing (VVT), which strangles the engine a little tighter and makes it run hotter.

The average motorist has never even heard of variable valve timing, but it's a critical component in the operation of a vehicle. Almost every vehicle manufacturer has published a bulletin stating that the number-one cause of variable-valve-timing system problems is small amounts of residue and sludge. In other words, cleanliness is absolutely essential.

In the old days, the engine's intake and exhaust valves were set to open and shut at specific points in the four-stroke cycle for a set amount of time. With variable valve timing, engines can adjust the timing for when and how long these valves open and shut by relying on a combination of sensors and mechanical systems, many critically located on the camshaft and crankshaft. When these components get gummed-up with sludge or deposits, it can lead to poor performance and costly repair bills.

Because AMSOIL synthetic motor oil resists oxidation and breakdown in high heat, it is less prone to produce the varnish and sludge that damages these critical sensors.

Keeping engines clean by using AMSOIL synthetic motor oils helps them last longer. Cleanliness reduces wear, ring sticking and emissions while helping ensure all these components operate as designed.

AMSOIL Introduces New OE Synthetic Automatic Transmission Fluid

New AMSOIL OE Multi-Vehicle Synthetic Automatic Transmission Fluid (OTF) and OE Fuel-Efficient Synthetic Automatic Transmission Fluid (OTL) provide excellent wear protection, heat resistance and cold-flow properties throughout original equipment manufacturer (OEM)-recommended service intervals.

ATF Product Line Complete

OE Synthetic ATF rounds out the AMSOIL synthetic automatic transmission fluid line. Signature Series Synthetic Automatic Transmission Fluid (ATF, ATL) was introduced in April to offer the most benefits in applications where heavy towing, elevated temperatures and challenging terrain are common. Its severe-service performance and reserve protection exceed the needs of most passenger-car/light-truck owners. OE Synthetic ATF offers motorists a premium synthetic ATF at a lower price.

Outstanding Wear Protection

AMSOIL OE Synthetic ATF is durable. In normal and severe service, it resists wear to the transmission's valve body, gears, clutch plates and other vital parts, helping today's complex and demanding transmissions achieve long life.

Resists Varnish

In elevated heat, AMSOIL OE Synthetic ATF's thermally stable formulation guards against the harmful effects of thermal breakdown. It resists the formation of varnish that can stick valves, threatening transmission performance and life. OE Synthetic ATF also resists heat-related evaporation and viscosity loss to help components stay clean and remain protected.

Reliable Cold-Weather Performance

AMSOIL OE Synthetic ATF remains fluid in sub-zero temperatures. It resists thickening and flows quickly for fast, reliable shifts during cold starts. Its excellent low-temperature fluidity also maximizes fuel efficiency.

Excellent Leak Protection

Formulated with seal conditioners, AMSOIL OE Synthetic ATF helps prevent seals and gaskets from drying out and cracking, reducing the risk of fluid leaks.

Promotes Smooth, Shudder-Free Shifts

AMSOIL OE Synthetic ATF is formulated with friction modifiers that promote fast, smooth clutch engagement. As a result, drivers experience fast shift response and torque transfer for maximum drivability.

Applications

AMSOIL OE Multi-Vehicle Synthetic Automatic Transmission Fluid is recommended for transmissions and other applications that require any of the following specifications:

Ford MERCON®, MERCON® V, ESP-M2C166-H; GM DEXRON® III; **Chrysler** MOPAR® AS68RC; Allison C-4, TES-389; **Audi** G 052 162, G 052 990, G 055 025; **BMW** 7045E, LA 2634, LT 71141; **Honda** ATF-Z1 (not CVT); **Hyundai** SP-II and SP-III; Idemitsu K17; JWS 3309, 3314, 3317; **Kia** SP-II and SP-III, ATF Red-1; MAN 339F, 339 V1, 339 V2, 339 Z1 & Z2; **Mazda** ATF-M III, ATF-MV; **Mercedes Benz** 236.1, 236.2, 236.3, 236.5, 236.6, 236.7, 236.9, 236.10, 236.11, 236.81; **Mitsubishi** SP-II and SP-III; **Nissan** Matic-D, Matic-J, Matic-K; Shell 3403, LA 2634; **Subaru** ATF, ATF-HP; **Suzuki** 3314 & 3317; Texaco ETL-7045E, ETL-8072B, N402; **Toyota** Type T-III and T-IV; Voith 55.6335. XX (G607), 55.6336.XX (G1363); **Volvo** 97340, 97341; **Volkswagen** G 052 162, G 052 990, G 055 025; ZF TE-ML 03D, 04D, 05L, 09, 11B, 14A, 14B, 16L, 17C

Note: Not for use with CVT or Ford Type F applications.

AMSOIL warrants the use of this product for Chrysler ATF+4® applications above -38°F. Product does not meet the cold temperature requirement of ATF+4 at -40°F. For warranty information, visit www.amsoil.com/warranty.

AMSOIL OE Fuel-Efficient Synthetic Automatic Transmission Fluid is recommended for transmissions and other applications that require any of the following specifications:

Ford MERCON® LV; GM DEXRON® VI; Aisin-Warner AW-1; **Audi** G 055 005, G 055 162, G 060 162; **BMW** 83 22 0 142 516, 83 22 2 152 426; **Honda** DW-1®; **Hyundai/Kia** SP-IV; JWS 3324; **Mitsubishi** SP-IV, ATF J2; **Nissan** Matic-S; **Saab** 93 165 147; Shell M-1375.4, M-1375.5, M-1375.6, M-L 12108; **Toyota** WS; **Volkswagen** G 055 005, G 055 162, G 060 162

Note: Not for use with CVT applications.

OE Multi-Vehicle Synthetic Automatic Transmission Fluid

Stock #	Units	Pkg./Size	Wt. Lbs.	Comm. Credits	U.S. Wholesale	U.S. Sugg. Retail	Can Wholesale	Can Sugg. Retail
OTFQT	-EA	1 Quart	2.0	2.95	6.55	8.50	7.05	9.10
OTFQT	-CA	12 Quarts	24.0	35.42	74.40	100.45	80.40	108.00
OTF1G	-EA	1 Gallon	7.9	11.62	25.65	33.35	27.60	35.80
OTF1G	-CA	4 Gallons	31.6	46.47	97.60	131.80	105.00	141.60

OE Fuel-Efficient Synthetic Automatic Transmission Fluid

Stock #	Units	Pkg./Size	Wt. Lbs.	Comm. Credits	U.S. Wholesale	U.S. Sugg. Retail	Can Wholesale	Can Sugg. Retail
OTLQT	-EA	1 Quart	2.0	2.83	6.25	8.15	6.75	8.75
OTLQT	-CA	12 Quarts	24.0	33.99	71.40	96.40	76.80	103.80
OTL1G	-EA	1 Gallon	7.9	11.14	24.60	32.00	26.45	34.40
OTL1G	-CA	4 Gallons	31.6	44.56	93.60	126.40	100.60	136.00

Visit the Preferred Customer Zone at www.amsoil.com for pricing of larger package sizes.

Fuel Quality Critical to Diesel Performance

Diesel fuel quality varies by location depending on the nature of the crude oil and refining practices used to make it. AMSOIL diesel fuel additives are designed to address variations in diesel fuel quality. In the first of a three-part series, *AMSOIL Magazine* looks at different types of diesel fuel and how quality is measured.

Diesel Fuel Defined

Diesel fuel is any liquid fuel used in a diesel engine. The most common type is a specific fraction distillate of petroleum fuel oil often called petro diesel to distinguish it from non-petroleum alternatives, including biodiesel, biomass-to-liquid (BTL) or gas-to-liquid (GTL) diesel.

Diesel fuel is heavier and oilier than other types of fuel. It has a complex chemical structure with many different compounds. Compared to gasoline, diesel evaporates more slowly and features higher energy density (approximately 147,000 BTUs/gal. vs. approximately 125,000 BTUs/gal. for gasoline). Increased fuel efficiency is one reason diesel vehicles continue gaining favor in the U.S.

Ultra-Low-Sulfur Diesel Fuel (ULSD)

Hydro-treating, a refining process that removes sulfur, produces ULSD, which became widely available in the U.S. in 2006. ULSD is diesel fuel with no more than 15 ppm sulfur. Environmental Protection Agency (EPA) requirements dictated that ULSD comprise 80 percent of the highway diesel fuel in the U.S. The percentage increased to 100 percent in 2010. These fuel requirements, coupled with advanced emission-control technologies, decrease emissions from newer engines by more than 90 percent and help decrease emissions from older diesel engines, too.

Increased Pump & Injector Wear

To guard against catastrophic wear, diesel fuel must have a minimum level of lubricity. Diesel lubricity is largely provided by trace levels of naturally occurring polar compounds that form a protective layer on metal surfaces. The hydro-treating process used to reduce sulfur can alter these compounds and reduce lubricity, increasing wear to the fuel pump and injectors and possibly leading to engine failure. As such, the lubrication properties of fuel have become a key parameter of diesel fuel specifications, particularly in ULSD.

Biodiesel

Biodiesel – a biodegradable, renewable source of energy – continues to command interest. Biodiesel fuels are made from agricultural or animal products, such as corn, coconut, chicken or fish. Agricultural oils have high concentrations of fatty acid methyl esters, which provide better performance than animal-based oils. Due to the ester content of the fuel, using low levels of biodiesel can increase the life of fuel injection equipment that relies on the fuel for lubrication.

Biodiesel is commonly blended with diesel for the retail marketplace. Biodiesel can be used in pure form – 100 percent biodiesel is referred to as B100 – or may be blended with diesel at any concentration to be used in most diesel engines. Common blends include B2, B5 and B20. Tests have shown that the addition of a small amount of biodiesel can significantly increase the lubricity of fuel. However, biodiesel can negatively affect gaskets, seals and hoses due to the different solvent properties of the fuel.

How Quality is Measured

The principal measure of diesel fuel quality is its cetane number, a measure of the fuel's ignition quality. Cetane number influences combustion. Requirements depend on engine design, size, nature of speed and load variations and starting and atmospheric conditions. A higher cetane number indicates that the fuel ignites more readily and burns more completely when sprayed into hot compressed air.

In the U.S., the Standard Specification for Diesel Fuel Oils (ASTM D975) establishes a minimum cetane requirement of 40. Most diesel fuel sold in North America has a cetane value between 40-45. Diesel engines operate best on fuel with cetane values of 50 or higher. To protect diesel fuel-injection equipment, ASTM D975 requires diesel fuel to meet a lubricity requirement of a maximum wear scar diameter of 520 microns in the High Frequency Reciprocating Rig Test (ASTM D6079).

AMSOIL diesel fuel additives compensate for variations in diesel fuel quality. Diesel Injector Clean (ADF) adds lubricity to ULSD, maximizing pump and injector life while increasing horsepower and fuel economy. Diesel Cetane Boost (ACB) raises the cetane of fuel up to seven numbers for maximum power and performance.

Next month, part two of this series examines the challenges new diesel fuel-injection technologies pose to performance and how AMSOIL diesel fuel additives are formulated to address them. ■

AMSOIL P.i.® Performance Improver Stands Up To Its Name

Wyman Atkinson of Ontario, Canada has been using AMSOIL products for several years and uses P.i. to help pass emissions tests with his 1988 Buick Century (280,611 mi) and 2005 Saturn ION (93,206 mi).

Wyman Atkinson of Ontario, Canada has been using AMSOIL products for several years and uses P.i. Performance Improver to help pass emissions tests with his 1988 Buick Century (280,111 mi) and 2005 Saturn ION (93,206 mi).

"In order to pass the emissions test for my 1988 Buick," Atkinson said, "I added P.i. to the gas, beginning several years ago. It passes the E-test parameters with tons of room to spare."

Atkinson has also been using AMSOIL products in his 2005 Saturn ION since he drove it off the showroom floor. "I use Signature Series 5W-30 Synthetic Motor Oil, along with P.i. twice per year," said Atkinson. "The E-test numbers for the Saturn are practically zero for all parameters."

Wyman Atkinson and his Dealer Dan Reaume stand with the 1988 Buick Century and the 2005 Saturn ION.

"About a month ago the pipe from the exhaust manifold rotted away. Because this was a welded assembly, I had to replace the CAT. A reimbursement is issued if the old CAT is returned. When I brought it back to the parts store, the customer service rep remarked how extremely clean the converter was for being 25 years old. I told him about adding P.i. to the gas twice per year for the last four years. He was absolutely amazed! I also checked the oxygen sensor (original), located on the exhaust manifold. It, too, was clean as a whistle and still operating properly after 25 years."

Atkinson's lawn machines shown with the AMSOIL products he uses to keep them running smoothly.

Atkinson also uses AMSOIL products in his 20-year-old lawn mower, his six-year-old weed whacker and his 25-year-old garden tractor and says, "They've never run so well. Unbelievable results!"

Atkinson also noticed some other benefits of using AMSOIL P.i. when he recently had his Buick's exhaust system serviced.

AMSOIL P.i. Performance Improver ranks among the most potent gasoline additives available today. P.i. is formulated to remove injector deposits, clean internal components and reduce emissions to help increase efficiency and performance.

As a concentrated detergent, P.i. is outstanding in cleaning combustion chamber deposits, intake valve deposits and port fuel injector deposits. It is ideal for use prior to emissions testing and helps maintain peak engine efficiency, fuel economy, power and drivability in newer low-mileage engines. In engines with accumulated deposits, P.i. provides up to 5.7 percent increased fuel mileage after only one tank of gasoline.

Emerging technologies will improve fuel economy and challenge lubricants.

AMSOIL products can help avoid expensive repairs in this evolving market.

Dan Peterson | VICE PRESIDENT, TECHNICAL DEVELOPMENT

Most of you have heard about the changes in the Corporate Average Fuel Economy (CAFE) standards set by the Environmental Protection Agency (EPA) for cars and light trucks. The calculation for CAFE is somewhat complex, but according to the National Highway Traffic Safety Administration (NHTSA), the projected actual combined CAFE requirements for 2013 model-year vehicles will be 25.7 mpg. This is in contrast to the highly publicized improvement phases proposed over the next 12 years. The NHTSA projects the first phase, which covers 2017-2021, will result in a CAFE standard of 40.3-41.0 mpg. The second phase, which was recently announced, covers standards for 2022-2025 vehicle years with a projected CAFE of 48.7-49.7 mpg.

These changes are basically doubling fuel efficiency requirements over the next 12 years and forcing vehicle manufacturers to make fundamental changes in vehicle design to meet the standards. Everything is on the table, including incentives for "game-changing" technologies, like hybridization for full-size pickup trucks. Fully electric and hybrid vehicles will become a bigger part of manufacturers' offerings. These fundamental changes in powertrain technology will have a bigger footprint in future years. The really big changes in engine design already in play include gasoline direct injection, turbocharging, variable valve timing, partial engine shutdown, full engine shutdown and increased use of diesel-fueled engines in passenger cars.

Transmission design is changing quickly also. Four-speed automatic transmissions are now dinosaurs; the new norm in North America is six- to eight-speed stepped automatic transmissions. European manufacturers have always favored manual transmissions, but are now moving toward dual-clutch transmission (DCT) technology for the combined fuel-economy/performance benefits over manual transmissions. Even perennial Formula 1 winner Michael Schumacher can't shift a manual transmission as fast as new DCT technologies. Asian automakers will continue to incorporate more continuously variable transmissions (CVTs) in their new vehicles. Nissan and Subaru are already heavily committed to this technology.

These new technologies do not always work exactly as expected the first time out of the factory, and they have many problems. Most of the technologies either place more stress on the lubricant, require much higher quality oil or both. As more expensive problems develop, prevention becomes more valuable, and premium-quality AMSOIL lubricants excel at preventing lubrication-related problems before they start.

Turbocharging and variable valve timing are two technologies that are going to be used widely and put particular stress on engines. People who have experience with turbochargers in diesel applications know the importance of good maintenance and the value of superior motor oils in these applications. Turbochargers use exhaust gases to compress combustion air to improve combustion efficiency. They spin up to 150,000 rpm and use hot exhaust gases as input power, and they are lubricated with motor oil. We profiled variable valve timing in May and highlighted the need for high-quality motor oil to prevent potential issues associated with this technology. In the future, many vehicles will use a combination of turbocharging and variable valve timing, putting exponentially more stress on the lubricant and further increasing the importance of using a high-quality motor oil like AMSOIL synthetic motor oil. ■

The new AMSOIL mechanical testing laboratory includes three 480-sq. ft. dyno cells.

NEW AMSOIL MECHANICAL LABORATORY EXPANDS TESTING CAPABILITIES

AMSOIL recently unveiled its new mechanical testing laboratory, featuring three 480-sq. ft. dyno cells capable of housing a minimum of two dynamometers each. Encompassing 8,500+ square feet of the AMSOIL Center, the new facility expands the company's abilities to test engine oil performance on-site, allowing quicker and more thorough test results for current products, developing products and competing products in both normal and extreme operating conditions.

The Dyno Cells

Cell 1 houses a state-of-the-art water brake dynamometer capable of absorbing up to 1,500 hp at the crankshaft. Critical engine parameters are measured and stored with the integrated data acquisition software. The cell is currently equipped with a two-cycle engine for the measurement of oil detergency properties. Snowmobile in-chassis testing, hand-held power equipment testing and small gasoline-engine testing will also be conducted on this dyno.

Cell 2 houses an eddy current dynamometer capable of absorbing up to 175 hp at the crankshaft. Using an electromagnetic brake for absorption, it provides precise load control that allows identification of very small differences in engine performance. Critical engine parameters are measured and stored using proprietary software. The GM 3800 Series II 3.8L V6 gasoline engine in this cell provides extremely hot temperatures and allows in-depth testing and measuring of deposits, wear and oil durability.

Cell 3 houses a motorcycle-specific eddy current dynamometer capable of absorbing up to 200 hp at the rear wheel, with critical engine parameters measured and stored with the latest data acquisition software. A variable speed controlled fan simulates air speeds in excess of 65 mph during testing sequences. Designed for in-chassis testing of equipment such as motorcycles and ATVs, it currently holds a Harley-Davidson motorcycle.

The company's investment in this new state-of-the-art dyno facility allows us to stay on the cutting edge of lubricant technology and generate marketing materials that demonstrate AMSOIL product performance.

"The company's investment in this new state-of-the-art dyno facility will make it easier for us to stay on the cutting edge of lubricant technology and generate marketing materials that demonstrate AMSOIL product performance," said AMSOIL Executive Vice President and COO Alan Amatuzio. "Having this dyno facility on-site allows faster testing turn-around times, testing flexibility that allows us to modify conditions to measure different oil properties and unique testing not available elsewhere. This all leads to better products and quicker product development."

"There are very few facilities in North America that have the combination of precision and capabilities available at the AMSOIL mechanical lab," said AMSOIL Vice President, Technical Development Dan Peterson. "It gives AMSOIL the ability for testing, development and stress tests only available at major original equipment manufacturers (OEMs) or additive companies. And because the facilities and equipment are designed specifically for work in our main markets, we have the advantage of solving problems earlier. It allows us to not only do things that no one else is doing, but to do things that others think are impossible."

A 4,000-gallon water supply tank provides ample process water to maintain engine temperatures throughout test sequences.

The GM 3800 Series II 3.8L V6 gasoline engine hooked up to the dynamometer allows in-depth testing and measuring of deposits, wear and oil durability.

A Harley-Davidson motorcycle undergoes dyno testing.

Snowmobile in-chassis testing, hand-held power equipment testing and small gasoline-engine testing will be conducted with the water brake dynamometer.

The powersports dynamometer is designed for in-chassis testing of equipment such as motorcycles and ATVs.

Controlled Test Environment

Programmable Logic Control (PLC) automation of the air, water and fuel systems allows precise control of the testing environments within each cell, providing repeatable test results.

Air

PLC integration of intake and exhaust fans allows the setting of intake air pressure, and the combustion air system provides 3,000 cubic feet/minute (cfm) of temperature- and humidity-controlled air directly to the test engines. Intake air volume is adjustable to 20,000 cfm, and in-cell air can turn over 3.8 times per minute, ensuring excellent air quality throughout testing. Carbon monoxide and hydrocarbon sensors are installed in each cell to warn of any air-quality issues.

Water

A 4,000-gallon water supply tank provides ample process water to maintain engine temperatures throughout test sequences. All process water returns to the in-floor sump tank, and once it reaches a set level, it is pumped back to the supply tank. A roof-mounted cooling tower ensures the water returns to the supply tank at a preset temperature.

Fuel

An outdoor fuel supply tank stores 2,000 gallons of premium unleaded fuel for the dyno cells. All lines are fully welded for safety, and a pressure sensor is installed to detect system pressure loss, allowing shutdown of the fuel supply pump in the event of an unexpected fuel line breach.

Fire Safety

Each dyno cell is protected from fire by the FM200 fire suppression system. This waterless system effectively extinguishes combustible, electrical and flammable-liquid fires quickly without causing collateral damage to equipment or personnel. The FM200 system includes five in-cell, ceiling-mount heat sensors, as well as manual pull stations inside and outside each cell. ■

Major Moves for Team AMSOIL

Eli Tomac and Wil Hahn ready to compete in 450 class next season

The GEICO/AMSOIL/Honda Supercross/motocross team has an enviable reputation for developing young riders into world champions, while also providing legends like Mike LaRocco and Kevin Windham a place to cement their legacies.

The 2014 season will mark a significant transition in this established philosophy as the team expands its presence to include two 450 class riders, each promoted from within the team's impressive stable of 250 class riders.

Starting with the 2014 Monster Energy Supercross season-opener in Anaheim, Calif., champion 250 riders Eli Tomac and Wil Hahn will move up to ride AMSOIL-backed Honda bikes in the elite 450 class.

Following in Trey Canard and Justin Barcia's footsteps, Tomac will be the third GEICO/AMSOIL/Honda rider to reach the pinnacle of the sport after joining the team as a fresh-faced amateur. The Cortez, Colo. native was in his early teens when he first caught the eye of team owner Rick Zielfelder. It's been a partnership that's produced dozens of race wins and the 2012 Supercross 250 West title.

"As an amateur, GEICO/AMSOIL/Honda was a team you looked up to," Tomac said. "They always had a great 250 team and legendary guys like Mike LaRocco and Kevin Windham on their 450. What we're doing now is a step in a new direction. It's going to be like a whole new program. To be one of the first guys to make it happen is really cool."

After a breakout season in 2009, Hahn joined the team for the 2010 season. Unfortunately, in his first race with the team, he broke his back during practice and spent the bulk of the next two seasons recovering from various injuries. Despite the setbacks, Hahn's presence became a valued one on the team and the group's patience was rewarded this season when he finished on the podium in all nine 250 East races, including two wins, on his way to the title.

"I didn't start with them as an amateur, but I feel like I did," Hahn said. "I was around the team a lot when I was younger, hanging out with my brother, Tommy. I've always felt love from this team and I'm honored they asked me to ride the 450 for them. They stuck with me during times when a lot of teams would have let me go. They saw something in me, they kept me on and it paid off for both sides."

Team owner Jeff Majkrzak said expanding to two 450 riders is a big step, but one the team has been working toward for a long time.

"We only wanted to expand to two 450 riders if we could do it the right way," Majkrzak said. "We wanted to make sure our major partners – GEICO, Honda and AMSOIL – were ready and willing to go on this ride with us. The timing was perfect and we're excited for the team's future with Eli and Wil leading the way for our 250 and amateur teams."

Tomac and Hahn are both excited to make the transition to the top class in familiar surroundings.

"Moving to a 450 is a big enough step as it is," Tomac said. "I would imagine that the transition would be a lot harder if you've got to learn a new motorcycle and a new team. I won't have to do that. I already know this inside and out. I'm excited to get started."

"Riding for a factory 450 team is something you dream about as a kid," Hahn said. "Everyone on the team has a constant drive and determination to win. Everyone works together for that goal."

The Supercross world will get a preview of the new 450 duo when they take to the track at the October 19 Monster Energy Cup at Sam Boyd Stadium in Las Vegas.

Behind the Scenes at Top Truck Challenge 2013

Four Wheeler magazine's annual Top Truck Challenge brought competitors to Hollister Hills, Calif. as they attempted to survive three days of swamps, slopes, boulders and quagmire in one piece. As the event's Official Oil, AMSOIL products were fully equipped in each truck, while AMSOIL Technical Product Manager Len Groom and Integrated Marketing Director Erica Danielski were on-hand as trusted advisors. Valuable social media content gathered throughout the event served to reinforce the AMSOIL brand for truck enthusiasts.

Claiming the Top Truck Challenge title requires consistency through a wide variety of grueling events designed to put even the toughest trucks to the test:

Tow Test, Frame Twister & Mud Pit

The Tow Test gauged trucks' abilities to drag a 40,000-pound cement truck up a steep incline.

From there it was on to the Frame Twister, where a 424-foot mix of concrete, logs, water and mayhem awaited. The timed challenge required a good strategy to make it through.

The Mud Pit is an unassuming 138-foot pit of soft dirt mixed with thousands of gallons of water.

Obstacle Course, Hill Climb & Coal Chute

At just a quarter-mile long, the Obstacle Course is designed with obstruction in mind. Starting with a steep descent down a slippery hill, competitors faced the challenge of making it down without rolling their rigs.

Facing a 60-degree incline with deep, strategically placed holes scattered throughout, the Hill Climb is hailed as 600 feet of misery.

The Coal Chute was new to the competition this year. Not sure what to expect, competitors lined up to take a shot at a mountain climb littered with Top Truck Challenge staples such as boulders, ledges, cement pipes and concrete obstacles. After clearing those, they faced a near-vertical waterfall climb.

Tank Trap

After enduring triumph, tribulation and broken parts leading up to the final test of endurance, the Tank Trap aims to take down any competitors left standing. Water holes, waterfalls, ledge-filled canyons and steep loose-dirt holes all led drivers to their final task: a steep, rutted, nasty hill climb.

When the dust (and mud) finally settled, John and Ken Retzloff earned the 2013 Top Truck Challenge championship with their 1977 GMC K15 Sierra. The brothers communicated and worked well together through each event, earning consistent finishes to take the title, a sizeable trophy, $1,000 in AMSOIL products and well-deserved bragging rights.

"The Top Truck Challenge provides AMSOIL an outstanding opportunity to reach truck enthusiasts and demonstrate product performance in a market where vehicles are put through unbelievably severe operating conditions," said Danielski. "Coverage in *Four Wheeler* magazine and a DVD release of the event provides valuable exposure for AMSOIL products in the truck market." ■

ON THE BOX

WITH **JEREMY MEYER**

Team AMSOIL off-road drivers Chad Hord and Scott Douglas recently visited AMSOIL corporate headquarters for a morning of sponsorship discussions and activities. They also took time to pick up some products, detail on-going testing procedures and take a tour of the new AMSOIL Mechanical Testing Lab.

While they were in town, we grabbed a few shots of the duo walking through the buildings and posted them to our social media sites. We have talked about the growing AMSOIL presence on Facebook, YouTube and Twitter in the past, but we sometimes forget about what these race teams are up to.

To find out the latest, and really connect with AMSOIL-sponsored race teams, series and events, just go online. The AMSOIL Racing website (amsoilracing.com) is updated daily, and all our teams and series are active on social media programs and stay busy beyond the track on a daily basis.

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Holiday Closings

The AMSOIL corporate headquarters, U.S. distribution centers and Canadian distribution centers will be closed Monday, September 2 for Labor Day.

Most Aerosol Products No Longer Available in Canada

Aerosol products are governed under different requirements in Canada than in the U.S., and recent changes to those requirements would require AMSOIL to alter its formulations in ways that would reduce performance and increase costs. Additionally, historical sales for aerosol products in Canada do not support the increasing production and export costs required to continue offering them in Canada. Because AMSOIL does not want to offer less-effective products that cost more, most aerosols are no longer available in Canada. While this isn't the preferred outcome, it is the one that makes the most sense for customers and the company.

Biodegradable Hydraulic Oil Price Adjustment

Due to an increase in raw material costs, a minimal price adjustment on Biodegradable Hydraulic Oil (BHO) takes effect August 1.

Semi-Fluid Synthetic EP Grease Color Change

The AMSOIL Semi-Fluid 00 Synthetic EP Grease (GSF) formula has been updated. While it provides the same superior protection and performance, its color has changed from red to green.

AGGRAND Patch

Four-inch iron- or sew-on patch.

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G3180	1.95	2.10

Leather Motorcycle Jacket

Leather motorcycle jacket features debossed logo and "Ride Hard. Run Cool.™" sleeve design. Zippered air vents with leather tabs on front and back, reflective piping on front and back, zippered wrist closures, two inside pockets (one zippered) and mesh inner lining. Runs small; order one size larger than you normally wear. Sizes S-3X.

Stock #	Size	U.S.	Can.
G3171	S	275.00	294.00
G3172	M	275.00	294.00
G3173	L	275.00	294.00
G3174	XL	275.00	294.00
G3175	2X	300.00	321.00
G3176	3X	300.00	321.00

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