AMSOIL MAGAZINE

▸ PREFERRED CUSTOMER EDITION

MAY 2014

OUTSTANDING PROTECTION FOR CONTINUOUSLY VARIABLE TRANSMISSIONS (CVTS)

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Don't Forget the Gear Oil | PAGE 10

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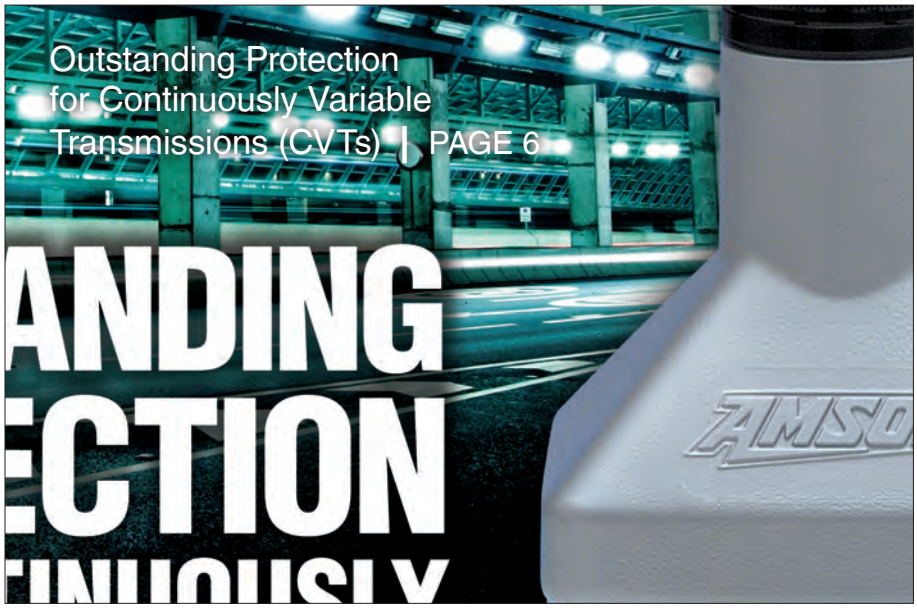

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Printed by Service Printers
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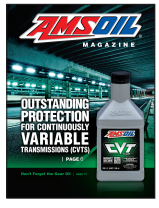


THE COVER

New AMSOIL Synthetic CVT Fluid offers a cost-effective, premium-quality alternative to vehicle-manufacturer-branded fluids.

From the President's Desk

Take a look at Gene Halsey's letter to the editor in this month's edition. He touches on an issue that I have been sensitive to for years. You can read it for yourself. I will only say that he is right on the money when he writes, *But if a Dealer doesn't take the time to build a relationship with that customer, his or her retention percentage will show that. As a Dealer who has been around for a long time, I can honestly say that getting customers is sometimes easier than keeping them, especially if you don't take the time to do it right.*

The issue here, of course, is service. The easiest way to lose customers and accounts is to let them die on the vine. It brings to mind an encounter I have shared with you in the past. Unfortunately, it is not an isolated incident.

I was approached by a man who was quite familiar with AMSOIL products. He introduced himself and soon revealed that the retail establishment he owned was an AMSOIL account. He was pleased to report that his AMSOIL customer base had grown steadily, and he has had outstanding results with our products in all of his personal vehicles.

That was the good news.

It turns out he had not seen or heard from his AMSOIL servicing Dealer for over a year. Prior to this, the Dealer had contacted him regularly, delivered products when needed and established himself as an authority on lubrication. In short, he had done a fine job. But now the man had no AMSOIL products on his shelves and was missing out on sales. It was not something I wanted to hear.

This guy could have ordered products directly from AMSOIL, of course, but that was not the issue as I saw it. He had become accustomed to receiving service at the personal level and depended on his Dealer for guidance. Now, that wasn't happening. He was left to fend for himself.

Normally, I might reserve this message for Dealers only, but it's important for those Preferred Customers who may one day decide to own AMSOIL Dealerships to receive it too. There is virtually nothing that will destroy an AMSOIL business more quickly than a lack of service, especially if the business relationship had been built on that service.

That is not to say that all Dealers are negligent in the service they provide. Far from it. And it is not to say that all Dealers must become totally hands-on or apply pressure to their accounts. But all accounts do need service, and it is up to the Dealer to ensure that he or she provides the appropriate level.

The important thing to remember is that the Dealer network, to a large extent, is the face of AMSOIL, and the image our Dealers project and the professionalism they display reflect directly on the company and all other AMSOIL Dealers. It has taken over 40 years to build the strong, quality-first image we have built, and I expect all Dealers and our corporate staff to respect the tremendous effort that has been invested to achieve it.

Don't get me wrong. I realize that most AMSOIL Dealers do a fine job, and I couldn't be more pleased. I have seen Dealers from all different backgrounds and skill levels build incredibly successful AMSOIL Dealerships. Dealers keep proving over and over again that you don't have to be a professional salesperson to succeed in this business. It all starts with understanding the products and making a commitment to dig in and work. I ask only that you represent the company with integrity and always do what is best for your customers. Give them the service they deserve.

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

Today's Fuel has Issues

Most vehicle owners are unaware of how dirty the insides of their engines actually are. Today's fuel has very low levels of additives, which allows deposits to build up quickly, impeding engine operation. Deposits on valves absorb fuel when the engine is still cold, altering the air-to-fuel ratio. They can also disrupt air flow into the cylinders and cause the valves to stick. Deposits that accumulate on fuel injectors cause an irregular spray pattern, making the air/fuel mix less efficient for burning. Deposits that build up in the combustion chamber can cause excessive temperatures, which can lead to pre-ignition or knocking. Combustion-chamber deposits can also "flake off" and become stuck between the exhaust valve and seat, causing it to stick slightly open. These issues ultimately lead to diminished fuel economy, increased emissions, loss of power and rough engine operation.

AMSOIL P.i. (API) is a potent formula with detergents that remove deposits. It works by cleaning everything the fuel touches, including fuel injectors, intake valves and combustion chambers. In just one tank of gasoline it removes deposits that have built up over thousands of miles, thereby restoring power, improving engine operation, reducing emissions and increasing fuel economy. Product testing has shown fuel economy improvements of up to 5.7 percent and a reduction in emissions of up to 26 percent.

OUTSTANDING PROTECTION FOR CONTINUOUSLY VARIABLE TRANSMISSIONS (CVTS)

AMSOIL CVT Fluid offers higher performance at a cost-effective price.

While continuously variable transmissions (CVT) can be traced back to the sketches of Leonardo da Vinci, and the first patent was filed in 1886, the technology has been refined and is growing rapidly in popularity with major vehicle manufacturers. Today, several vehicle manufacturers, including Nissan, Honda and Toyota offer vehicles with CVTs.

Traditional, CVT and eCVT Transmissions

Traditional planetary automatic transmissions feature a defined set of gears that engage based on vehicle speed, while CVTs create unlimited gear ratios using a belt or chain running between two variable diameter pulleys. While drivers operating a traditional automatic transmission can feel each gear engage, CVT operators do not feel any such gear change. CVTs keep the rpm in the "sweet spot," resulting in better fuel economy and a smoother ride.

CVTs require a unique transmission fluid with specialized frictional characteristics designed to ensure the belt or chain remains in contact with the pulleys without slipping.

While the name suggests it's a variation of a CVT, an eCVT incorporates a conventional planetary gear set similar to a traditional automatic transmission, but controlled by an electric motor to create continuously variable gear ratios. Because they feature planetary gears, eCVTs are lubricated with traditional automatic transmission fluids, not CVT fluids.

AMSOIL Synthetic CVT Fluid

AMSOIL Synthetic CVT Fluid (CVT) provides outstanding protection and performance for CVTs throughout vehicle manufacturer-recommended drain intervals. Its exceptional metal-to-metal frictional properties help prevent belt and chain slipping for smooth, trouble-free operation. AMSOIL CVT Fluid resists oxidation and wear for maximum CVT life. It provides excellent wet-clutch performance for outstanding anti-shudder durability and reduced noise and vibration. AMSOIL CVT Fluid is Warranty Secure and will not void vehicle warranties.

Field Proven

Field testing was conducted to compare AMSOIL Synthetic CVT Fluid and Nissan NS-2 CVT Fluid. Four vehicles (two equipped with AMSOIL CVT Fluid and two with Nissan NS-2 CVT Fluid) were driven 100,000 miles before the transmissions were torn down and inspected.

As indicated by the lack of wear in the belt and pulley photos below, AMSOIL CVT Fluid provided outstanding protection throughout the duration of the field trial, proving it is a high-quality replacement for Nissan NS-2 CVT Fluid.

Lab Tested

AMSOIL lab testing also reveals AMSOIL CVT Fluid met, and in some cases surpassed, the protection and performance of Nissan NS-2 CVT Fluid:

- In FZG wear testing (ASTM D5182), Nissan NS-2 achieved a 7 stage pass, while AMSOIL CVT Fluid significantly surpassed it with an 11 stage pass.
- In the JASO LVFA Anti-Shudder Durability Test, AMSOIL CVT Fluid lasted six times longer, translating into improved anti-shudder durability and reduced noise, vibration and harshness.

Cost Effective, Premium Quality

With vehicle-manufacturer-branded fluids often costing $20 or more a quart and very few competing products on the market, AMSOIL CVT Fluid offers a cost-effective, premium-quality alternative, saving customers money.

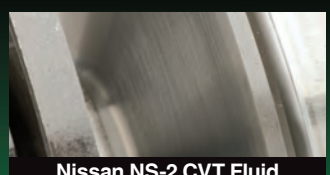
Changing CVT fluid is a relatively simple process. In fact, many applications have a drain plug and fill plug, making it easier to change than traditional transmission fluid. Vehicle service manuals should be consulted for specific instructions. ■

BELT ▼

Nissan NS-2 CVT Fluid

AMSOIL CVT Fluid

PULLEY ▼



Nissan NS-2 CVT Fluid

AMSOIL CVT Fluid

Synthetic CVT Fluid

Stock #	Units	Pkg./Size	Wt. Lbs.	U.S. Wholesale	U.S. Sugg. Retail	Can. Wholesale	Can. Sugg. Retail
CVTQT	EA	1 Quart	2.0	9.50	12.75	11.50	15.40
CVTQT	CA	12 Quarts	24.0	108.15	151.45	131.40	183.60
CVTTP	EA	(1) 2.5 Gallon	19.5	92.05	121.05	111.55	146.50
CVTTP	CA	(2) 2.5 Gallons	39.0	175.25	240.10	212.40	291.00
CVT55	EA	55-gal. Drum	430.0	1,776.50	2,256.20	2,154.00	2,736.00

AMSOIL SYNTHETIC GREASE HELPS CUSTOMER ACHIEVE PUNKIN CHUNKIN WORLD RECORD

AMSOIL synthetic lubricants are manufactured for many applications, but customers continue finding new ways to benefit from AMSOIL technology.

Steve Seigars of Greenfield, N.H. certainly fits into that category. Seigars leads the Yankee Siege II team in the annual Punkin Chunkin competition in Bridgeville, Del. The original Yankee Siege "punkin chunker" was retired a couple of years ago. "It's a silly sport," Seigars said, "but it's a lot of fun and raises money for scholarships, children's hospitals and other organizations that benefit youth and the local community." His team consists of a core group of five to six members.

AMSOIL Synthetic Grease Ends Friction Problem

AMSOIL Synthetic Polymeric Off-Road Grease solved an ongoing friction problem in Seigars' trebuchet. "I finally found a grease that prevented scuffing on my sleeve bearings," said Seigars. "We have the world record for throwing a pumpkin with a trebuchet. Last year we tossed a pumpkin 2,836 feet."

Seigars found AMSOIL after taking a tribology course that taught him the importance of using synthetic grease to overcome scuffing of bearings.

The Trebuchet

The trebuchet is a gravity-driven machine. It raises a 25,000-pound counterweight 5 feet in the air as it rotates on a lever with a sling and pouch. Bearings inside the sleeve of the round shaft inside a pipe allow the rotation. When the trigger is pulled, the weight drops and the sling comes to a screeching halt at the end of the bearings. That sudden stop applies about 150,000 pounds of pressure, which pounds the grease out and causes metal-to-metal friction. "You have to have good lubrication at all points so there is not metal-to-metal wear," Seigars said. He had been seeing scuffing of the bearings in his machine after about 10 to 15 cycles, which meant the bearings were wearing quickly.

Seigars learned in the tribology course that he needed a synthetic grease with 5 percent moly additive in order to stop the bearing wear. Research online led him to AMSOIL Synthetic Polymeric Off-Road Grease. "The combination was the answer to premature wear," Seigars said.

The Competition

The World Championship Punkin Chunkin Association (WCPCA) is a trademark nonprofit that hosts a signature pumpkin-launching event each year, fueling innovative engineering and science-based ideas that draw spectators from all over. About 105 teams enter the three-day event, typically held the weekend after Halloween.

According to the association's website, "Punkin Chunkin cultivates the odd, challenging and competitive quest for distance that inspires creativity, ingenuity, teamwork and passion."

Pumpkins can be launched using compressed air devices, such as cannons; catapults that use ropes and pulleys; and centrifugal-force machines that use a spinning arm to let the pumpkins fly.

Each team gets one shot per day. The longest shot at the end of the event is the winner. Winners earn a trophy and a donation to the charity of their choice. Seigars and the Yankee Siege II team won the trebuchet division last year with their record-setting 2,836-foot launch. The team chose the A.L.S. Family Charitable Foundation in Buzzards Bay, Mass. to receive a donation from the WCPCA. ■

GET READY FOR SUMMER WITH QUICKSHOT®

"Today's gas has ethanol in it, which is a problem for engines. It binds with water and ends up causing gumming, carbon build-up and rough running. The solution: AMSOIL Quickshot. I always carry the quart-size in my truck.

"I don't have time to be putting additives in anything unless they work. Quickshot is like magic. It keeps my engine running smooth."

– **Gary Parsons,** *Hall of Fame Angler with NextBite.TV*

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Most powersports engine problems are either mechanical, fuel-related or due to neglect.

AMSOIL offers products that can help avoid many of those problems.

Len Groom | TECHNICAL PRODUCT MANAGER - POWERSPORTS

The last thing I want to deal with during my free time in the summer is engine problems. I want to be riding or getting my outdoor chores done, not diagnosing. But if a diagnosis is required, I'm quick to remember that most engine problems or failures that affect powersports equipment are either mechanical, fuel-related or due to neglect. Here are some of the most common problems that affect motorcycles, marine and handheld power equipment and strategies to prevent them.

Motorcycles: With motorcycles and motorcycle oils, heat is always an issue. In air-cooled bikes, motorcycle oil must provide adequate protection over a wide range of temperatures. In motorcycles with a shared oil sump, the oil must lubricate not only the engine, but the clutch and transmission, too. It must protect gears while providing sufficient grip to keep the clutch from slipping. What can happen if the oil fails to perform? Imagine it's the middle of summer and the engine overheats. The motorcycle will lose oil pressure and the engine will start to make enough noise to make most riders pull off the road and either push their bikes or call for help. A poorly lubricated transmission can result in gear wear, hard shifting and difficulty finding neutral. AMSOIL Synthetic Motorcycle Oil keeps gears lubricated, clutches working properly and provides heat protection when equipment is pushed to the limit.

Marine: Fuel-related issues are a major cause of problems in powersports applications, and particularly in marine equipment. These problems are specific to ethanol-blended fuels because ethanol has a strong attraction to water. If moisture is present in fuel, ethanol will detach from the gas and attach itself to the water. The ethanol/water mixture then drops to the bottom of the fuel tank – the same location from where the engine draws fuel. When the engine tries to run on this mixture, all kinds of problems can occur, including lean burn and corrosion in the fuel lines, carburetors and fuel tanks. The AMSOIL solution is easy: Treat every tank of gasoline with Quickshot® (AQS) to ensure any moisture will be isolated and prevent the separation of gas and water.

Additionally, it's important to follow these guidelines when purchasing or storing fuel for use in powersports applications:

- Use only fresh gas and buy fuel from outlets that have a high fuel turnover.
- Use fuel with an octane level equal to or above that recommended by the equipment manufacturer.
- Don't store fuel for long periods of time, and only buy as much as you plan on using within the next 30 days. If fuel is stored longer than 30 days, be sure to add AMSOIL Gasoline Stabilizer (AST).
- Fuels containing up to 10 percent ethanol are usually acceptable in powersports equipment.
- Do not pre-mix any AMSOIL two-stroke oil with fuels containing more than 15 percent ethanol.

Handheld: Handheld equipment is largely powered by two-stroke engines. To pass emissions tests, this equipment is often designed to run on a lean air/fuel mixture, which doesn't leave much room for variances in fuel. And because this equipment is air-cooled, high temperatures can wreak havoc on the engine and lead to mechanical failure. When this happens, the engine oil is often blamed. AMSOIL SABER® Professional (ATP) is formulated specifically for high-heat, high-rpm, lean-burn, air-cooled power equipment. It is purpose-built to keep your equipment on the job, working until finished.

Beyond mechanical and fuel-related issues, other common causes for failure in powersports applications include the following:

- Ingestion of abrasive materials, such as dirt and dust
- Rust and corrosion caused by improper storage
- Abuse or lack of proper maintenance
- Reaching the end of equipment life expectancy

Although it is possible to experience an oil-related problem, the likelihood that the difficulty relates to a deficiency with an AMSOIL product is extremely remote. As we've discussed, mechanical problems and failures do occur in powersports equipment. If the problem is oil-related, the following reasons are most common:

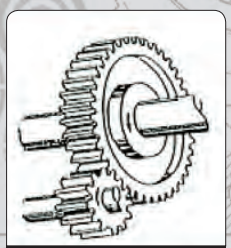
- The wrong fluid was used.
- Either too much or too little fluid was used.
- The lubricant was contaminated with dirt or water.

By simply using the right product in the right place in the right amount at the right time, many powersports engine problems can be avoided, and you can spend more time riding the roads, waters and trails and getting those weekend chores done, backed by the proven protection of AMSOIL products. ■

Don't Forget the Gear Oil

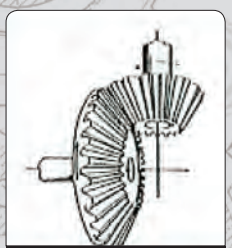
Gear oil is often overlooked when it comes to scheduled maintenance.

COMMON GEAR TYPES



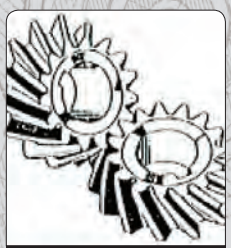
SPUR GEARS

Transmissions



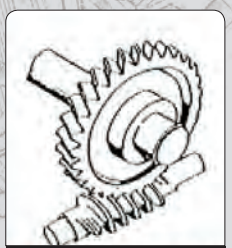
STRAIGHT BEVEL GEARS

Industrial Equipment
Some Differentials



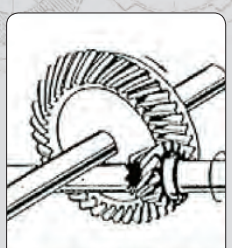
SPIRAL BEVEL GEARS

Industrial Equipment
Some Differentials



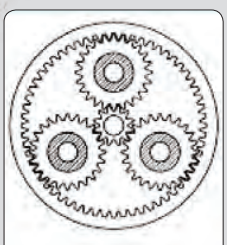
WORM GEAR SET

Gear Reduction Boxes



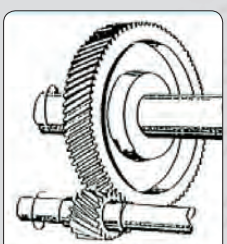
HYPOID GEARS

Differentials



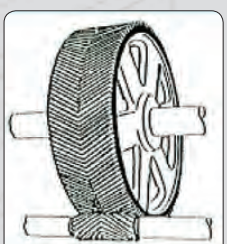
PLANETARY GEAR SET

Transmissions



HELICAL GEARS

Transmissions



HERRINGBONE GEARS

Transmissions

Gear Oil Basics

High-quality gear oil must lubricate, cool and protect geared systems. It must also carry damaging wear debris away from contact zones and muffle the sound of gear operation. Differential, standard transmission and industrial machinery gears often require extreme-temperature and pressure protection in order to prevent wear, pitting, spalling, scoring, scuffing and other damage that result in equipment failure and downtime. Protection against oxidation, thermal degradation, rust, copper corrosion and foaming is also important.

Gear Oil and Motor Oil Are Not the Same

Gear oil differs from motor oil. While many motorists may assume SAE 90 gear oil is thicker than SAE 40 or 50 motor oil, they are actually the same viscosity; the difference is in the additives.

Motor oil contains additives such as detergents and dispersants to combat byproduct chemicals from gasoline or diesel ignition. Because an internal combustion engine has an oil pump and lubricates the bearings with a hydrodynamic film, extreme-pressure additives such as those used in gear oils are not necessary.

Motor oils and gear oils both have anti-wear additives, and they both must lubricate, cool and protect components, but gear oils may be placed under extreme amounts of pressure, creating a propensity for boundary lubrication, a condition in which a full-fluid lubricating film is not present between two rubbing surfaces. For example, differentials in cars and trucks have a ring-and-pinion hypoid gear set. A hypoid gear set can experience boundary lubrication, pressures and sliding action that can wipe most of the lubricant off the gears. To combat this extreme environment, extreme-pressure additives are incorporated into the oil. AMSOIL synthetic gear oils are formulated with an extra treatment of extreme-pressure additives in order to reduce wear and extend gear and bearing life.

Additional Differences

Because many of the components found in the drivetrain consist of ferrous material, the lubricant must prevent rust and possible corrosion to other materials. Rust and corrosion problems are not nearly as prevalent in engines.

The many small and intricate components that make up gear sets can be quite noisy and may be subjected to shock-loading. The viscosity and extreme-pressure formulation of gear oil quiets gears and dissipates shock-loading.

The rotating motion of the gear sets also tends to churn the lubricant, leading to foaming. If a gear lube foams, its load-carrying capacity is significantly reduced because the air suspended within the oil is compressible. For example, when the gear teeth come into contact with each other, any trapped air bubbles compress, reducing the thickness of the separating oil film. In turn, this reduction could lead to direct metal-to-metal contact between gear teeth and result in accelerated wear. The gear oil must have the ability to dissipate this entrapped air, ensuring a sufficient lubricating film that protects the gears against contact wear.

Typical Drivetrain Fluid Additives

Much like with motor oil, the additives included in a gear oil formulation either enhance existing properties or impart new ones. Drivetrain fluid additives include the following:

- **Extreme-pressure and anti-wear agents** minimize component wear in boundary lubrication situations.
- **Pour-point depressants** improve low-temperature performance.
- **Rust and corrosion inhibitors** protect internal components.
- **Oxidation inhibitors** reduce the deteriorating effects of heat, increasing the oil's service life.

- **Viscosity index improvers** allow a lubricant to operate over a broader temperature range.
- **Anti-foam agents** suppress foaming tendency and dissipate entrapped air.
- **Friction modifiers** - The required degree of friction-reduction can vary significantly between different pieces of equipment in drivetrain applications. In some cases, friction modifiers may be required to obtain the desired results.

Gear Design Dictates Lube Design

Gear designs vary depending on the requirements for rotation speed, degree of gear reduction and torque-loading. Transmissions commonly use spur gears, while hypoid-gear designs are usually used as the main gearing in differentials. Common gear types include the following:

Spur

Spur (straight-cut) gears are widely used in parallel-shaft applications, such as transmissions, due to their low cost and high efficiency. The design allows the entire gear tooth to make contact with the tooth face at the same instant. As a result, this type of gearing is subjected to high shock-loading and uneven motion. Design limitations include excessive noise and a significant amount of backlash during high-speed operation.

Bevel

Bevel (straight- and spiral-cut) gears transmit motion between shafts that are at an angle to each other. Primarily found in industrial equipment, as well as some automotive applications (differentials), they offer efficient operation and are easy to manufacture. As with spur gears, they are limited due to their noisy operation at high speeds and are not the top choice where load-carrying capacity is required.

Worm

Worm gear sets employ a specially machined "worm" that conforms to the arc of the driven gear. This design increases torque throughput, improves accuracy and extends operating life. Primarily used to transmit power through non-intersecting shafts, this style of gear is frequently found in gear-reduction boxes as it offers quiet operation and high ratios. Its downfall is its low efficiency.

Hypoid

Hypoid gear sets are a form of bevel gear, but offer improved efficiency and higher ratios over traditional straight-bevel gears. Commonly found in axle differentials, hypoid gears are used to transmit power from the driveline to the axle shafts.

Planetary

Planetary gear sets, such as those found in automatic transmissions, provide the different gear ratios needed to propel a vehicle in the desired direction at the correct speed. Gear teeth remain in constant mesh, which allows gear changes to be made without engaging or disengaging the gears, as is required in a manual transmission. Instead, clutches and bands are used to either hold or release different members of the gear set to get the proper direction of rotation and gear ratio.

Helical

Helical gears differ from spur gears in that their teeth are not parallel to the shaft axis; they are cut in a helix or angle around the gear axis. During rotation, parts of several teeth may be in mesh at the same time, reducing some of the loading characteristics of the standard spur gear. However, this style of gearing can produce thrust forces parallel to the axis of the gear shaft. To minimize the effects, two helical gears with teeth opposite each other are used, which helps to cancel the thrust out during operation.

Herringbone

Herringbone gears are an improvement over the double helical gear design. Both right- and left-hand cuts are used on the same gear blank, cancelling out any thrust forces. Herringbone gears are capable of transmitting large amounts of horsepower and are frequently used in power transmission systems.

Differences in gear design create the need for significantly different lubricant formulations. For instance, hypoid gears normally found in automotive differentials require GL-5 concentration and the performance of extreme-pressure additives due to their spiral sliding action.

In differential applications that use hypoid gears, AMSOIL typically recommends one of the following: Severe Gear® 75W-90 Synthetic Gear Lube (SVG), Severe Gear 75W-110 Synthetic Gear Lube (SVT), Severe Gear 75W-140 Synthetic Gear Lube (SVO), 80W-90 Synthetic Gear Lube (AGL), 75W-90 Long Life Synthetic Gear Lube (FGR) or 80W-140 Long Life Synthetic Gear Lube (FGO).

Most manual transmissions have helical gears that do not require GL-5 performance. The helical gear is almost a straight-cut gear, but on an angle. There is spiral action and very little sliding action, and there is less need for extreme-pressure additives. GL-4 gear lubes provide less extreme-pressure additives than GL-5 lubes.

In manual transmissions using helical gears, AMSOIL typically recommends either Synthetic Synchromesh Transmission Fluid (MTF) or Synthetic Manual Transmission and Transaxle Gear Lube (MTG).

AMSOIL Provides Gear Oil Options

AMSOIL offers premium synthetic drivetrain lubricants to meet the needs of nearly every application. The synthetic base stocks and top-quality additive packages found in AMSOIL gear lubes and transmission fluids provide the ultimate in wear protection for cars, trucks, outboards, heavy-duty and racing applications.

Four Straight for Bowers

Team AMSOIL rider fights through adversity for four-peat.

AMSOIL Arenacross kicked off in Worcester, Mass. in January with a bevy of new initiatives for the 2014 season. The Ricky Carmichael Road to Supercross was established to provide amateur riders the right training ground to race in the sport's biggest show, Monster Energy Supercross. The 12-round series also made its debut on Fox Sports 1 and 2, featuring two main events of racing and the Race to the Championship (ROC), a playoff-inspired showdown to crown the season champion.

The changes did not affect three-time defending champion Tyler Bowers, as the Kentucky native succeeded in winning his fourth straight AMSOIL Arenacross title.

The season started with a mixed basket of results and an injury that could have derailed the Team AMSOIL rider. After winning the first two main events during the opening round in Worcester, Bowers struggled during the Saturday-night show, finishing 12th and 14th in the two main events. It was later discovered that he had broken the bottom part of his tibia, and he had two screws inserted to hold the bone together.

"I wasn't really sure if I broke it at first," said Bowers. "But we went in [to the hospital] on the Monday after Worcester and got it set up and went racing the following weekend."

With the series shifting to Baltimore, Bowers fought through the injury and an aggressive field of riders that saw their chance to stop the hobbled champion's three-year run. Bowers finished second overall in Maryland, and began churning out heat wins at his usual championship pace, taking 17 wins out of 32 main events to end the year. Bowers was nearly unstoppable once the ROC started, winning the overall in the last five rounds and taking the checkered flag in the last seven main events.

"It's been a crazy year, getting injured at the first round and having to fight through adversity pretty much all season," said Bowers, who joins Buddy Antunez and Dennis Hawthorne as the only four-peat champions in AMSOIL Arenacross history. "I'm just happy to be a champion again. [AMSOIL teammate] Zach Ames made it tough on me this year and forced me to be at my best every week. These [championships] are never easy, but we refused to give up, kept at it every week and here we are with a fourth straight title."

The 2014 AMSOIL Arenacross Series continues to air through May 17 on Fox Sports 1, with repeat airings on Fox Sports 2. Check local listings for air times and availability.

ON THE BOX

WITH **JEREMY MEYER**

The racing pages in *AMSOIL Magazine* have covered in great length Crandon International Raceway and its place in off-road lore. The AMSOIL sponsored track and home of the annual AMSOIL Cup race deserves all the admiration it receives, and the venue is a perfect example of how a sponsorship often goes beyond the marquee.

Crandon, Wis., despite just 1,800 residents, has grown into a Mecca for enthusiasts of all things dirt-related and is abuzz with activity year-round, drawing valuable exposure for AMSOIL products.

This year the track will host the World Extreme Rock Crawling Dirt Riot Series (W.E. ROCK) championship August 8-10, offering up a Triple Crown of off-road racing starting with the June 22 TORC race and culminating with the annual Labor Day Weekend race. The track also hosts other non-racing events that draw large crowds, including this year's inaugural Colors of Cancer 5K Run/Walk on the famed high-speed track.

Most often people dwell on the big-ticket items to measure sponsorship success, but when you start looking past the headliner, the depth of a partnership really comes into focus.

Borich Sets GNCC Record

AMSOIL-backed rider continues assault on record books.

After tying the all-time AMSOIL Grand National Cross Country (GNCC) series victory mark, it didn't take long for Team AMSOIL rider Chris Borich to secure his record-breaking 69th career win.

The five-time AMSOIL GNCC champion broke the career mark at the FMF Steele Creek GNCC in Morganton, N.C. on March 29, overcoming a rain-soaked course and a hungry field led by Jarrod McClure and Walker Fowler.

"I wasn't expecting it, but my big thing was to go out there and try to win this race and get a points lead," Borich said. "I knew it was going to be a tough race; you had to pay attention out there, be smooth and watch the lines. I'm not going to lie; seeing Walker ride to the starting line first really burned me up, so I wanted more than anything to get that points lead back in my possession."

Borich and the AMSOIL GNCC head to Loretta Lynn's Ranch in Hurricane Mills, Tenn. May 10-11 for round six of the 2014 season. Visit www.amsoilracing.com to watch the race live.

Black Diamond Motorsports Joins Team AMSOIL

Record-setting drag racing team partners with the Official Oil of IHRA.

AMSOIL has teamed up with International Hot Rod Association (IHRA) drag racing team Black Diamond Motorsports (BDMS). The Black Diamond team of Kevin and Karen Bealko and John DeFlorian has moved from a single-car operation in 2007 to a two-car effort in 2014, and the team's enthusiasm for drag racing has only increased along the way.

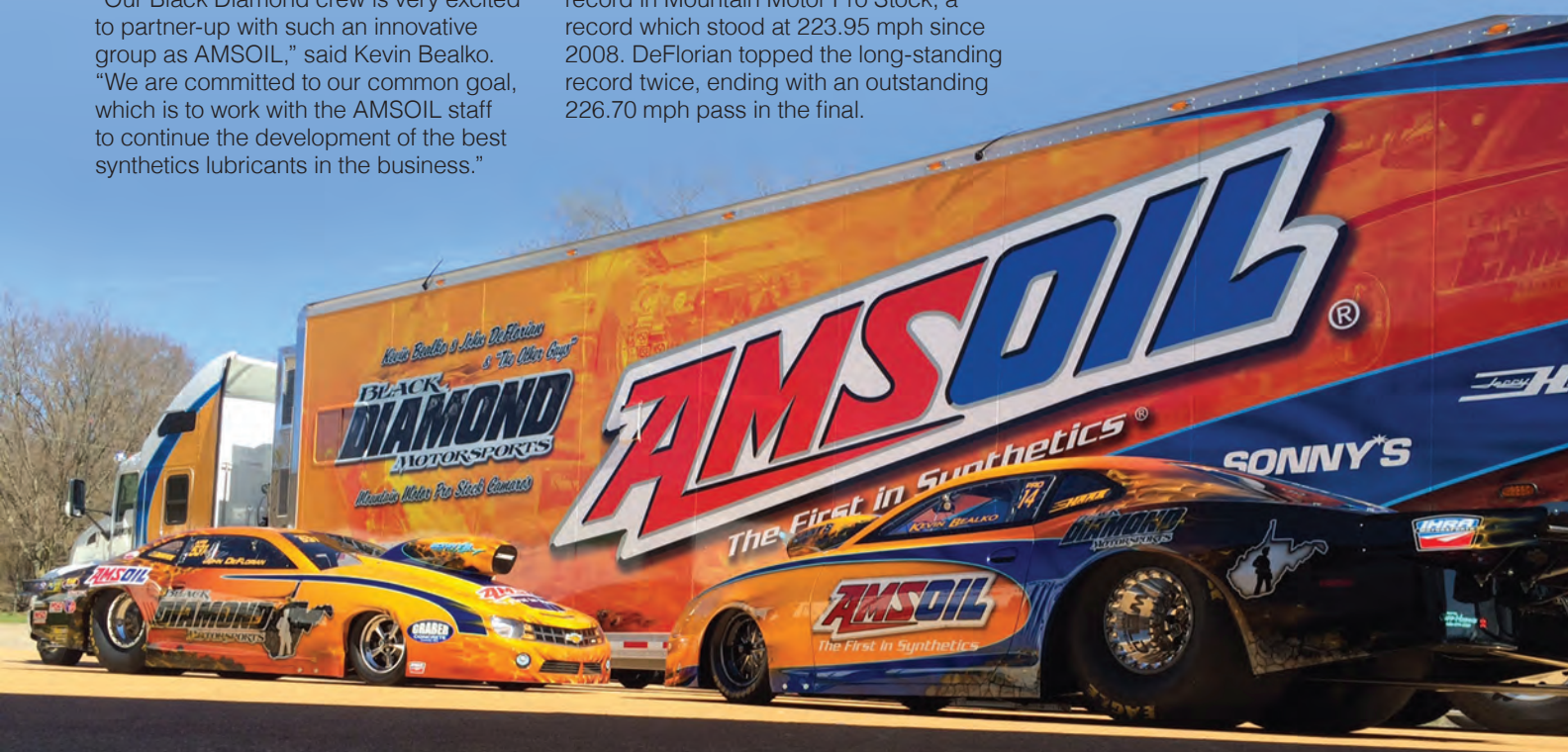
"Our Black Diamond crew is very excited to partner-up with such an innovative group as AMSOIL," said Kevin Bealko. "We are committed to our common goal, which is to work with the AMSOIL staff to continue the development of the best synthetics lubricants in the business."

BDMS reset established elapsed time (ET) and miles per hour (mph) speed records throughout the 2012-2013 season, while accumulating multiple wins in both ADRL and XDRL competition, and the team has its sites set on more records and wins this season.

At the San Antonio Nationals in March, DeFlorian obliterated the IHRA speed record in Mountain Motor Pro Stock, a record which stood at 223.95 mph since 2008. DeFlorian topped the long-standing record twice, ending with an outstanding 226.70 mph pass in the final.

The run not only gave the driver of the BDMS Camaro the record, it also helped propel him to his first career victory in IHRA competition.

Up next for BDMS are the Nitro Jam events at Palm Beach International Raceway in Jupiter, Fla. May 2-3 and Rockingham Dragway in Rockingham, N.C. May 17-18.



Holiday Closings

The AMSOIL corporate headquarters and U.S. distribution centers will be closed Monday, May 26 for Memorial Day. The Edmonton and Toronto distribution centers will be closed Monday, May 19 for Victoria Day.

Potential Metal Protector Backorder

An inventory issue has created the potential for backorders of U.S.-labeled AMSOIL Metal Protector (AMP). To mitigate the issue and reduce backorders, orders for U.S.-labeled Metal Protector will be temporarily filled with Canadian-labeled Metal Protector (CMP) until the issue is resolved in early June. The Canadian-labeled product features the same chemistry as the U.S.-labeled product, but has a slightly different label and includes a fan actuator instead of a stream actuator. The Canadian label does not meet California label requirements. Therefore, MP is not available in California until further notice. Be aware that, despite these efforts, Metal Protector may still be temporarily backordered in both countries in late May.

Navy Cap

Navy cap with contrast stitching. Embroidered logo and Velcro closure.

Stock #	U.S.	Can.
G3263	14.75	17.80

Pro Racing T-Shirt

Features 50/50 cotton/ polyester blend for comfort and durability. Sizes S-3X.

Stock #	Size	U.S.	Can.
G2642	S	13.75	16.65
G2643	M	13.75	16.65
G2644	L	13.75	16.65
G2645	XL	13.75	16.65
G2646	2X	15.50	18.75
G2647	3X	17.00	20.55

Ladies' V-Neck T-Shirt

Ladies' 100% cotton t-shirt with stretch features distressed logo. Runs small. If in doubt, order a size larger. Sizes S-2X.

Stock #	Size	U.S.	Can.
G3135	S	14.95	18.10
G3136	M	14.95	18.10
G3137	L	14.95	18.10
G3138	XL	14.95	18.10
G3139	2X	15.95	19.30

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. Fitted; order one size larger than you normally wear. Sizes S-3X.

Stock #	Size	U.S.	Can.
G3171	S	275.00	333.00
G3172	M	275.00	333.00
G3173	L	275.00	333.00
G3174	XL	275.00	333.00
G3175	2X	300.00	363.00
G3176	3X	300.00	363.00

Front

Back

Front

Back

Ladies’ Leather Motorcycle Jacket

Ladies’ 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. Fitted; order one size larger than you normally wear. Sizes M-2X.

Stock #	Size	U.S.	Can.
G3182	M	275.00	333.00
G3183	L	275.00	333.00
G3184	XL	275.00	333.00
G3185	2X	300.00	363.00

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www.amsoil.com | May 2014

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