



RACING IS

For AMSOIL, a day at the track isn't just entertainment. Research through racing provides the opportunity to develop and validate AMSOIL lubricants in some of the toughest applications around. The effect doesn't apply only to products for racing applications; it resonates throughout the entire AMSOIL product line. It's an underlying philosophy captured in the phrase "Racing is Research," and it has helped guide product development since the company's early days.

Seeking ways to validate his revolutionary synthetic lubricants in the early 1970s, AMSOIL President and CEO Al Amatuzio instinctively knew America's race tracks and courses held an answer. For many, nothing proves a lubricant's effectiveness like its performance in high-powered racing applications, which require a level of performance beyond the average car or truck.

Such was the case with legendary racer Bobby Unser. He needed a gear lube capable of withstanding the punishment doled out by Colorado's famous Pike's Peak Hill Climb, an event Unser won a record 13 times. His rear differential was failing prior to reaching the summit. Amatuzio supplied Unser's team with AMSOIL Synthetic Gear Lube, and the differential performed flawlessly throughout several practice sessions, qualifying and race day. The partnership was a win-win, providing AMSOIL valuable data and a convincing demonstration of the lubricant's performance. It also placed Unser in the best position for victory. The deep-seated connection between AMSOIL and racing was born.

Seeking Out the Most Extreme Situations

The cumulative information AMSOIL has gathered through racing has been instrumental in the development and validation of numerous products, including Severe Gear® Synthetic Gear Lube. A rapid increase in engine power and towing capacities offered by modern SUVs and trucks highlighted the need for a gear lube that raised the bar for performance. AMSOIL responded with Severe Gear, a product that has been extensively validated in the severe conditions of off-road racing. Its excellent performance in the 900-hp trucks driven by Scott Douglas and his AMSOIL Super Team counterparts in the Traxxas TORC Series presented by AMSOIL

offer convincing proof that the lubricant meets the most demanding conditions encountered by owners of SUVs and trucks.

"Racing allows us to identify the most extreme operating conditions and develop lubricants that meet or exceed those standards," said Len Groom, Technical Product Manager, Powersports. "The information we gather has direct bearing on the passenger car/light truck market as well, with vehicles becoming more sophisticated and generating increased power and heat."

Prior to Severe Gear, off-road racers, rockcrawling competitors and others were using a popular gear lube with less-than-ideal performance. The predominant product was capable of clinging to gears despite intense centrifugal forces, shock-loading conditions and the steep angles from driving over massive boulders and obstacles; however, its ability to stay in place came at a price. "The gear lube was the consistency of molasses," said AMSOIL Race Program Manager Jeremy Meyer. "Extensive manipulation was required to increase its temperature into an operable range. Before a race, some teams actually raised their vehicles and ran them in place to warm the gear lube."

The synthetic chemistry of Severe Gear eliminates the need for pre-race warm-up by providing excellent fluidity. SAE 250 and SAE 190 Severe Gear, used in rockcrawlers like the AMSOIL-sponsored machine driven by Brad Lovell, incorporate a unique tackifier that clings tenaciously to gears and bearings in severe-service vehicles. "Competitors are always amazed how even the heavy viscosities of Severe Gear provide excellent protection while remaining fluid," said Meyer. The other viscosities also provide ex-



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ceptional protection, but are optimized for fuel efficiency. "Unless you're taking corners at 100 mph or landing massive jumps, you don't need the high viscosity or tackifier," said Meyer.

Every Racer has a Need

The extreme shearing forces inside Bob Teague's Mercury® 525 EFI V-8 racing engines helped provide the demanding conditions required to develop Dominator® Synthetic Racing Oil. "Bob Teague's marine engines operate at one speed: wide-open throttle," said Meyer. "If an oil maintains its viscosity in that environment, we know it will perform equally as well in other applications."



The severe shearing forces inside Bob Teague's racing engines provide the perfect proving grounds for Dominator Synthetic Racing Oil. An entire teardown revealed virtually no bluing on the wrist pins and no piston skirt scuffing.

The previous oil used by Teague was shearing out of its viscosity range after only one race, compromising wear protection. AMSOIL redeveloped its 20W-50 racing oil into Dominator 15W-50 Synthetic Racing Oil (RD50). Dominator 10W-30 (RD30) and 5W-20 (RD20) Synthetic Racing Oils were also added. Dominator incorporates durable, shear-stable base oils that maintain viscosity despite rigorous mechanical action. The oil has allowed Teague to extend oil-change intervals to every three races while providing excellent protection. "The engines are sent to Mercury following each season to be refreshed, and the Mercury technicians couldn't believe how good they looked inside," said Groom. "There was virtually no wear to speak of."

Equally as impressive is the performance of Dominator on the track. The oil coolsers on the off-road trucks driven by Scott Douglas, Chad Hord and other TORC off-road racers quickly become caked with mud during a race. Oil temperatures often skyrocket to 300°F and beyond, which can reduce oil pressure and compromise wear protection. Dominator's ability to resist thermal break-

down and continue providing maximum wear protection is proven during every TORC race.

Dispelling the Wet-Clutch Myth

AMSOIL Synthetic Motorcycle Oil is also thoroughly tested on the track, providing the opportunity to dispel the myth that synthetics are "too slippery" for use in wet clutches. "The AMSOIL/Factory Connection/Honda team approached us with a need: they wanted faster starts out of the gates," said Meyer. One way to achieve that goal is through improved clutch performance. AMSOIL 10W-40 Synthetic Motorcycle Oil (MCF) has proven extremely effective in Factory Connection's Honda CRF 250 and 450 dirt bikes; the team sees less clutch wear and enjoys more positive shift feel. The results have been nothing short of impressive. Justin Barcia won the Monster Energy Supercross East Coast Lites championship this year, while teammate Eli Tomac took the West Coast Lites title.

Other AMSOIL synthetic lubricants are also heavily researched and validated in professional racing applications. INTERCEPTOR® and DOMINATOR Synthetic 2-Stroke Oils, for example, lubricate and protect Arctic Cat®, Polaris® and Ski-Doo® snowmobiles driven by champion racers P.J. Wanderscheid, Ross Martin and Robbie Malinoski. Their flawless performance in the toughest engines, including Ski-Doo's Rotax® engines, validates the performance claims AMSOIL makes about each oil.

The Same Lubricants Available to Everyone

Laboratory research, field validation and racing are the backbone of AMSOIL product development, and it's been that way since day one. "Racing is Research' isn't just a slogan; it embodies the extensive research AMSOIL performs on race tracks throughout North America — research that directly benefits everyone. The exact same lubricants used in professional racing vehicles are the same lubricants available to all AMSOIL users," said Meyer.

The results gathered from on-track research are not limited to racing products. The knowledge is applied to the entire AMSOIL product line to ensure AMSOIL products provide the best-possible protection and performance. ■