



Len Groom

AMSOIL INC. continually monitors trends in the powersports market to maintain its position as the industry leader. AMSOIL synthetic two- and four-cycle motor oils, filtration and performance products for

powersports applications are the result of years of research. *AMSOIL Magazine* spoke with AMSOIL Technical Powersports Product Manager Len Groom to identify trends in the industry and explain how AMSOIL products provide distinct advantages.

AMSOIL Magazine: Daytona Bike Week Presented by AMSOIL marked the unofficial start to the spring motorcycle season. As bikers take to the streets this summer, what trends figure to surface?

Len Groom: Fuel maintenance is already a big issue and will only become more prevalent. Currently, most gasoline sold in the U.S. contains up to 10 percent ethanol (E10), and government agencies and lawmakers have been debating increasing ethanol levels to 15 percent (E15). As such, riders need to be aware of their environments. Because ethanol is very susceptible to water intrusion, bikes should not be stored in damp or wet environments. When water is allowed to collect in the gas tank, the bond between ethanol and gasoline can break, causing a phenomenon known as phase separation. The ethanol bonds with the water and sinks to the bottom of the fuel tank, which can create a whole host of problems, including the formation of gums, varnish and other insoluble debris that can plug fuel flow passages and negatively affect engine performance. When this ethanol/water mixture is pulled into the engine, it creates a lean-burn situation that increases combustion chamber temperatures and can lead to engine damage. Once this happens there is no easy or inexpensive fix. To avoid these problems, contaminated fuel tanks should be emptied and refilled with fresh fuel.

AMSOIL Magazine: What can riders do to protect their bikes against phase separation?

Len Groom: For best performance, fuel should be treated with AMSOIL Quickshot® as a preventative measure. Quickshot is designed to keep water dispersed throughout the fuel tank, mov-

ing it out as a normal part of operation and decreasing the chance of phase separation. Not only that, Quickshot helps clean deposits that have formed in fuel systems, injectors and carburetors, while also cleaning piston tops, spark plugs and combustion chambers. Unlike many competing fuel additives, Quickshot is extremely potent and not diluted. It provides some of the most effective cleaning action available today, making it an all-around great product for motorcycles and other powersports equipment.

AMSOIL Magazine: Many enthusiasts and Dealers question why AMSOIL does not manufacture a transmission-specific lube for bikes at present.

Groom: The motorcycle market is very diverse, and one transmission fluid cannot meet the needs of all the different bikes. Engine power, riding style, gear ratios and final drives all play a part in the selection of a transmission fluid. A heavy bike with a modified engine and an aggressive rider can place enormous amounts of stress on a transmission. In this case a heavier, more robust fluid is beneficial. On the other hand, a light bike with a stock engine and average rider could use a lighter fluid since the transmission does not suffer as much stress.

AMSOIL FACT:

QUICKSHOT ADDRESSES COMMON ETHANOL-RELATED PROBLEMS FOUND IN MOTORCYCLES AND POWERSPORTS EQUIPMENT.



The quality of our synthetic motorcycle oils allows us to effectively promote one fluid for a bike's engine, transmission and primary chaincase. They are incredibly shear-stable and demonstrate excellent results in the FZG Gear Test (ASTM D-5182). AMSOIL is aware that some riders prefer to use a traditional gear lube in their transmissions. For those riders, we recommend Severe Gear® Synthetic Gear Lube. It works well in heavily modified bikes and has also been very successful in quieting the "whine" from certain straight-cut gears. In the sport bike segment, however, gear lube is not used as much because it is friction-modified and many sport bikes share a common sump with a

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wet-clutch. Some applications, like the Honda CRF450R, combine the transmission and wet-clutch. In these cases, our synthetic motorcycle oils are the best choice due to their wet-clutch compatibility and excellent performance.

This approach, as opposed to manufacturing and recommending a single transmission-specific lube, allows AMSOIL and its Dealers the flexibility to be more application-specific and demonstrate to bikers how well we know the market.

AMSOIL Magazine: That being the case, how do riders determine which product to use and in which viscosity?

Groom: In most cases a product recommendation starts with the owner's manual. Warranty coverage must be considered when dealing with new bikes, while older bikes or modified engines can change recommendations. Sometimes a heavier gear lube is required to deal with added stress, or quiet a noise that can be common with a thinner fluid.

AMSOIL Magazine: Longtime riders may remember objections over synthetics being "too slippery" and leaking past seals. How has that myth also pervaded the dirt-bike market?

Groom: Clutch operation is critical with dirt bikes. Riders want a particular feel and they do not want any slippage. Some believe the myth that synthetic oil causes clutches to slip, but nothing could be further from the truth. A properly designed synthetic oil can actually provide better grip than a conventional product. As long as the product meets JASO specifications, there should be no problems. Using an automotive oil in a wet-clutch, however, can cause slipping because automotive oil contains friction modifiers to increase fuel efficiency. Although ideal in engine applications, friction modifiers can be very bad for a wet-clutch.

AMSOIL Magazine: As in the auto/light-truck market, manufacturers are building motorcycles that produce increased torque and horsepower compared to their predecessors. Plus, riders often modify their bikes for even more power. What challenges does this trend present to the fluids that protect them?

Groom: Increased power creates challenges, including additional stress on engine components and elevated operating temperatures. Inferior oils may not provide sufficient wear protection, high-temperature performance or shear stability. The added stress can rupture the fluid film, allowing metal-to-metal contact. Extra stress also degrades the oil more quickly due to increased oxidation and can shear the oil out of its intended viscosity grade, causing accelerated wear. Problems resulting from elevated operating temperatures are especially noticeable in air-cooled bikes, where oil temperatures can become so high in stop-and-go summer driving that riders are forced to pull over and shut down.

AMSOIL Magazine: Those sound like good reasons to use AMSOIL Synthetic Motorcycle Oils.

Groom: Absolutely. Because of those challenges, use of synthetic oils in general, and AMSOIL Synthetic Motorcycle Oils in particular, is becoming commonplace. The efforts of AMSOIL and its Dealers are paying off, and most bikers now understand firsthand that synthetics provide increased wear protection, better high-temperature performance and maximum shear stability in today's more powerful bikes. Enthusiasts have received the message about the benefits AMSOIL provides, and they are increasingly recognizing our status as the leader in synthetic lubrication technology. They know that AMSOIL uses the best technology available to satisfy the needs of modern powersports equipment; we examine each application and develop products based on needs and we invest in extensive testing to ensure each product performs to AMSOIL standards. With AMSOIL there are no compromises.

AMSOIL Magazine: What trends are surfacing on the water this summer?

Groom: Again, ethanol is huge. Outboard motors and fuel tanks are just as susceptible to its corrosive effects as motorcycles. Because boats obviously contact water constantly, the threat of phase separation only worsens. Like in other powersports applications, Quick-shot provides an effective solution.

Another key development is the increasing use of sophisticated engine technologies on some modern outboards that place additional stress on the motor oil. As with other markets, synthetic oils are being relied on more and more in the boating industry, and AMSOIL synthetic two- and four-cycle oils provide exceptional protection in all types of inboard and outboard motors.

AMSOIL Magazine: Moving on to ATV applications, why does AMSOIL recommend Formula 4-Stroke® Power Sports Oil (0W-40) in applications that call for OEM-labeled 50-weight oils?

Groom: As the graph shows, while Polaris Synthetic PS-4 Plus and Arctic Cat Synthetic ACX motor oils fall within a 50-weight viscosity range directly from the bottle, both quickly shear down into the 40-weight range. AMSOIL subjected both oils along with Formula 4-Stroke Power Sports Oil to ASTM D-7109 shear stability testing, and after only 30 passes, both OEM-labeled oils sheared out of their starting viscosity grades. After 90 passes, the Polaris oil lost over 33 percent of its viscosity, while the Arctic Cat oil lost over 30 percent. The AMSOIL product, however, lost less than 5 percent. Its exceptional shear stability allows it to protect high-RPM ATV engines as well as or better than both 50-weight OEM oils. ■

