



News Release

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ATV BELT HEALS SELF – Goodyear’s new Gatorback Sport ATV drive belt is the first CVT belt with carbon fiber reinforcement in its rubber compound. When handling an extreme load demand, the carbon fiber allows desired slippage on pulleys without top-width belt distortion. After the extreme demand subsides, the carbon material restores the integrity of belt edges in order to handle the normal load demand.

Hi-resolution photo available at: www.goodyear.com/cfmx/web/mediaphotos.
Enter Keyword: ATV

Goodyear introduces carbon fiber ATV drive belt

INDIANAPOLIS, Ind., February 16, 2007 – Goodyear Engineered Products is hitting the trail with a “self-healing” carbon-fiber-loaded ATV drive belt that can reduce the possibility of a long walk home.

Goodyear Gatorback Sport is the first Continuously Variable Transmission or CVT belt with carbon fiber reinforcement in its body construction, according to Loren Danhauer, Goodyear chief belt engineer.

“Threadlike strands of carbon fiber are strong and flexible and weigh much less than steel of similar strength,” said Danhauer. “The fiber alignment in the rubber compound provides added stiffness across the width of the belt.”

Jonathan Cocco, marketing manager for Goodyear aftermarket products, said a Goodyear survey of quad riders shows they want precise, immediate throttle response and off-road durability whether for hunters, ranchers, fire rescue teams or sport enthusiasts.

A CVT system varies the working ratio of two v-shaped pulleys linked by the belt, said Cocco. The distance between pulley flanges can fluctuate, allowing the belt to ride smoothly up or down the pulley, continuously changing the gear ratio and varying vehicle speeds.

The pulleys are part of a power sensing drive that increases tension during acceleration and lowers tension when power is reduced.

Danhauer explained that conventional CVT belt sidewalls can glaze and char from heat buildup when engaged with pulleys under extreme loads. Materials from the top width of the belt then turn down and inward, creating vibrations that can quickly destroy the belt.

“Gatorback Sport regulates itself under extreme events,” said Danhauer. “Its carbon fiber in the rubber compound allows desired edge slippage without losing top width. When extreme demand subsides, the belt self-heals and again picks up the load.”

Danhauer added that tests he conducted show significantly improved top width wear and reduced belt weight loss.

Cocco said Gatorback Sport is responsive and durable. “Its aggressive carbon fiber material maintains pulley grip without sacrificing belt wear,” he said. “It provides quick, clean throttle response to help riders conquer steep hills and nasty mud pits, while withstanding inadvertent abuse, such as spin-and-runs.”

Gatorback Sport’s performance was born from race technology introduced last year. Hendrick Motorsports and eventual NASCAR Nextel Cup Series Champion Jimmy Johnson turned to Goodyear for help after making mid-season engine adjustments for added horsepower that increased demand on cam drive belts by 50 percent.

Goodyear quickly responded by mixing carbon fiber reinforcement in rubber compounds for the new timing belt. The result was an advanced composite that withstood the increased loads and higher temperatures, allowed engines to run more efficiently, and provided precision timing in a very harsh environment.

“Buoyed by our success with carbon fiber, we went to work on the CVT belt for all-terrain vehicles,” said Cocco. “Its performance earns it the Gatorback name, joining a growing family of popular Gatorback automotive belts that are used by all major NASCAR Cup Series teams and are available in auto part stores and service centers.”

While Gatorback Sport’s lateral strength comes from carbon fiber, its longitudinal strength comes from Goodyear Flexten aramid cords traveling the circumference of the belt. Flexten minimizes stretch, stabilizes overall length and maximizes horsepower transmission. “It adds up to predictable tension performance,” said Danhauer, “and tension is as important to belts as air pressure is to tires.”

Engineers also took care when designing belt dimensions, precisely duplicating most major ATV manufacturers' original equipment profiles and measurements for top width, length and sidewalls to ensure proper fits.

Gatorback Sport’s top width range is 17 to 35 millimeters or 0.68 to 1.37 inches, while its length range is 679 to 1106 mm or 26.75 to 43.56 inches.

For additional information, go to goodyearbeltsandhose.com.