

Automotive News

GM seeks a market beyond the snow belt for awd models Buick will give benefits of 'twin clutch' big play

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Automotive News | December 21, 2015 - 12:01 am EST

All-wheel drive isn't just for the snow belt anymore. That's the gist of the pitch that will come from Buick when the redesigned 2017 LaCrosse sedan comes out next summer. It's one of several new General Motors models that will get a "twin clutch" awd system from British supplier GKN Driveline.

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Buick has offered awd on the current LaCrosse for years without much success. The take rate on the roughly \$2,000 option is less than 10 percent.

Buick hopes to drive that penetration higher by touting the virtues of the twin-clutch system, which is engineered to improve grip and handling across all conditions, including on dry pavement.

"This has a real performance element to it, with big benefits on acceleration and cornering," LaCrosse Marketing Manager Doug Osterhoff said in a recent interview. "We think this will have more play" in warm-weather states where consumers have traditionally eschewed the awd option.

Most awd systems for front-wheel-drive vehicles use a clutch at the front axle that controls the amount of torque that flows to the rear wheels. A differential typically is used to split the torque between the rear wheels.

GKN's twin-clutch system instead uses two electronically controlled clutch packs in the center of the rear driveline module that can control torque between the axles, sending 100 percent of torque to the front, or back, as needed based on driving conditions.



The Cadillac XT5 midsize crossover goes on sale this spring.

The two clutches also replace the need for a differential and can split torque between the rear wheels independently, directing up to 100 percent of grip laterally across the rear axle as needed.

That ability to seamlessly shift torque between the rear wheels offers improved ride and handling and other characteristics that traditional awd systems don't, says Ray Kuczera, GKN's vice president of global product technology. The two-clutch setup is similar to GKN-sourced awd systems used on the Range Rover Evoque crossover and the Ford Focus RS performance model.

"Customers are seeing awd as more than just a go-anywhere traction feature," Kuczera said. "The two-clutch system can also influence the vehicle dynamics and improve the feeling of the car when you're going straight or turning. It's more nuanced vehicle control."

The system on the XT5 adds another feature: the ability to disconnect the awd system completely when the vehicle is in Tour mode, which saves fuel. In other modes, it can automatically switch off the system at speeds above about 40 mph.

Kuczera expects the disconnecting feature to become more common on awd systems amid tightening fuel-economy regulations.

"As OEMs get more and more worried about saving fuel, having these twin clutches is the most efficient way to disconnect the rear," he said.

Still, automotive marketers will have a tough time conveying the technical benefits of the newfangled awd systems to consumers, AutoPacific Inc. analyst Dave Sullivan says. He adds: "Consumers tend to see awd systems as one and the same."



The 2017 Buick LaCrosse will be one of several GM models to get the new twin-clutch awd system.

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