

'Virtual bumpers' can help avoid crashes

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Radars, vision, and ultrasonic sensors in Cadillac vehicles constantly analyze road data to determine if a crash may be imminent. In such cases the vehicle's automatic front and rear braking will engage. Credit: John F. Martin for Cadillac

Three new Cadillac models, including the ATS sport sedan, have a new advanced safety system that can automatically stop the vehicle in low-speed conditions to help avoid crashes.

Cadillac's Front and Rear Automatic Braking acts like a "virtual bumper," slamming on the brakes as a last resort to help drivers in <u>heavy</u>



traffic or even in parking lots and driveways where the driver might fail to see another <u>vehicle</u> or object in his path.

Automatic Front and Rear Braking is part of the new optional Driver Assist Package on the 2013 ATS sport sedan, XTS luxury sedan and SRX crossover. Relying on a network of sophisticated sensors and advanced electronics, the system can help <u>drivers</u> avoid crashes in lowspeed conditions and reduce impact speed under higher speed circumstances.



If the driver fails to respond to alerts, such as the Safety Seat Alert, vibrations or rear vision camera notifications, and a crash is imminent, the automatic braking is designed to apply the brakes and stop the vehicle. Credit: John F. Martin for Cadillac

"Radars, vision, and ultrasonic sensors in the vehicle are constantly



analyzing data and working together to determine if a crash may be imminent," said Charles Green, the <u>driver performance</u> specialist responsible for the development of the Driver Assist Package technologies. "Based on these calculations, the vehicle can automatically brake to avoid a crash or reduce impact speed, and if necessary, can apply the vehicle's maximum braking capability."

If the driver fails to respond to other alerts, such as the Safety Alert Seat vibrations, and a potential collision is imminent, the automatic braking is designed to apply the brakes and stop the vehicle. The driver may override any automatic braking action taken by the vehicle. If the system brings the car to a stop, the electronic parking brake will hold the car in place until the driver presses the accelerator pedal.

In developing the technology, engineers had to finesse the system to avoid unwanted activations, ensuring that it is only a last resort.

"We have spent eight years researching driver behavior which has been incorporated into the design of automatic braking in the <u>Cadillac</u> ATS, XTS, and SRX," said Green. "Our goal is to effectively provide an extra level of safety support while keeping the driver in complete control of the vehicle at all times."

The Driver Assist Package will be available on Performance and Premium trim levels of ATS, XTS, and SRX. The package also includes side blind zone alert and full-speed range adaptive cruise control. ATS and XTS models will also feature a full-color, reconfigurable head-up display that helps keep the driver's eyes on the road.

Provided by General Motors



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