Safety Features for your Automotive Wish List

Today's new cars offer great technology: They're more comfortable and more entertaining than ever before, with convenience features that help us be more efficient while we're on the road. However, they're also the most dangerous method of transportation: driving a car is the riskiest thing most people do in their day-to-day lives.

According to a **Virginia Tech Transportation Institute** study, nearly 80% of all crashes involve driver inattention within three seconds before the event. Such types of inattention that increase crash risk include talking on a cell phone (increases risk by 30%); dialing a cell phone (increases risk by 300%); drowsiness (increases risk by 400% and responsible for about 23% of all crashes and near-crashes); applying makeup (increases risk by 300%), and reaching for moving objects, like a falling cup (increases risk by 900%).

So, next time you go car hunting, consider this list of safety features among the options you might like to have in your next vehicle. You may not be able to get them ALL in one car, but you can certainly keep your eyes out for these features that help make your car safer on the road.

Night Vision Safety Technology
These systems work using Far Infrared imaging (much like the optics used in military-issue night-vision goggles) that scans the road for pedestrians and other moving objects up to four times beyond the headlight range. The infrared camera registers people and animals based on their body heat and movements, then alerts the driver and displays their enhanced images on a screen positioned either in the dash, instrument cluster, or heads-up display (depending on how the manufacturer implements the display). It even works to identify objects that may be hidden by fog or smoke.

Night Vision systems typically alert the driver to moving people and animals -- even bicyclists -- along the road edges, hidden among tree lines along the road path, and in front of the vehicle about 100 to 150 yards ahead of the vehicle, and depending on the speed of travel, give the driver up to 10 seconds to react. Night Vision Safety Technology is currently available on the Mercedes-Benz S-Class and S-Class Plug-in Hybrid; Audi A6, A7, and A8 (and the S models); and BMW 5-, 6-, and 7-Series sedans and coupes, and X6 CUV.

Around View Monitors
Around View Monitor systems provide a virtual 360-degree visual image of the car in a virtual bird's-eye view around the vehicle by processing input from four cameras on the front, rear, and sides of the vehicle's body, to display the composite footage on a video screen as if there is a single birds-eye view camera right above the vehicle. The Around View Monitor helps the driver visually confirm the vehicle's position relative to the lines around parking spaces and adjacent objects, allowing the driver to maneuver into parking spots with more ease. This technology debuted in 2007 on the Infiniti EX35, but has since migrated onto nearly all models in the Nissan/Infiniti lineup.

Moving Object Detection, the latest addition to the Around View System, detects movement in the front or the back of the vehicle but also senses motion on the sides, alerting the driver to moving objects around the vehicle. In fact, the in-dash display will even show the driver the area where the movement is occurring. The Around View Monitor with Moving Object Detection helps drivers to park more easily by better understanding the vehicle's surroundings, and also allows drivers to be more safely aware of obstacles like children or obstructions around the car. If you get too close, an audible warning will sound and a warning will appear on the screen.

Back-up Collision Intervention
Debuted in 2012 on the Infiniti QX60 and currently available on the Q50, Q70, and QX80 luxury vehicles, **Infiniti's Back-up Collision Intervention System** uses radar sensors near the rear bumper to help alert the driver to approaching vehicles or objects while backing up. If enabled, the system operates when the shift lever is in Reverse and the vehicle speed is less than about 5 miles per hour. When an object is detected, the system applies brief braking pressure while the vehicle is moving backward, and can actually stop the vehicle in time to prevent impact with obstacles, or even more importantly, people or children, behind it.

Pedestrian Detection and Braking

Pioneered by Volvo as "City Safety" in 2009 and now available in Acura, Ford, Mercedes-Benz, Subaru, and Toyota vehicles, pedestrian detection and braking systems are designed to help avoid hitting a pedestrian and to minimize injuries by stopping or slowing the vehicle if the driver does not react in time. Depending on the manufacturer, these systems employ radar and/or optical (camera) technology to detect pedestrians or cyclists in front the vehicle, and function best in daylight and clear weather conditions to bring a car to a full stop at speeds of 10 mph or below. As speeds increase, there's less time to detect, react, and brake, so not many systems will promise full stops at speeds beyond about 20 mph.

Rear Cross Traffic Alert

Using radar-based sensors that work in conjunction with Side Blind Zone alert systems, Rear Cross Traffic alert systems warn the driver of oncoming traffic coming from the side when backing out of a parking spot -- including angled parking. Visual and audible alerts are triggered if moving vehicles are detected, and the systems can detect cars, motorcycles, and bicycles, making them super helpful when you're backing out of a parking spot surrounded by large vehicles that impair your ability to see what might be coming from the side.

Once a premium feature only available on such high-end models as Mercedes-Benz and Jaguar, many mainstream carmakers such as Ford and Lincoln, Toyota and Lexus, Hyundai and Kia, Buick and Cadillac, and even Acura, Mazda, and Subaru, now offer such radar-based monitoring systems on many of their models.