

2015 AUTOS

NEW CAR GUIDE



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GUIDE

A Great Buying Climate

New car sales have been on the upswing in recent years, and it's no wonder why. From reliability and warranty coverage to the sense of pride in driving a brand-new, shiny vehicle, more and more people are making the jump into new cars.

LOW INTEREST RATES

A big reason for that increase in sales has been America's financial climate. After several years of low interest rates being offered, affordable financing has been available to more buyers lately.

Credit also is being extended at easier terms and for longer periods of time. While lending standards aren't quite as loose as they were in the heady days of 2007 and 2008, most buyers with reasonably good credit can qualify for loans at attractive interest rates.

Even buyers with poor or mediocre credit are frequently able to find financing options that can put them into a new car, although they might have to pay higher rates to do so. The bottom line is that across the credit spectrum, money is becoming available for vehicle financing to make it easier for buyers to purchase the car they need.

Unfortunately, no one knows how long the credit spigots will remain flowing and how long interest rates will remain this low. Many financial experts are



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predicting higher interest rates in the years to come after several years at historic lows, so now might be the right time to lock in favorable financing for your new car.

RELIABILITY

Another good reason to consider buying a new car is that reliability ratings, almost across the board, have improved in recent years.

While Japanese cars gained a reputation for dependability in the 1980s and '90s, the American, European and Korean brands have all improved their reliability ratings as

measured on owner surveys since that time. Cars from around the world are, in general, on much more equal footing compared to 10 or 15 years ago.

Digital Dashboards

Since the dawn of the automobile, mechanical gauges have helped to keep the driver informed about the speed and condition of their vehicle. From speedometers and tachometers to oil pressure and temperature gauges, the instrument cluster is an integral part of every car.

Increasingly, though, mechanical gauges are being replaced by a new, high-tech alternative: the digital dashboard.

LCD SCREENS

Instead of showing your speed, engine RPMs and other information using needles in a gauge, these new-generation instruments are displayed digitally on a high-resolution LCD screen behind the steering wheel.

Some cars have one big display, while others have two or three small screens that can be configured to show different information.

And while they started out on expensive, rare cars like the Lexus LF-A and Nissan GT-R, they're filtering down to more affordable vehicles lately. Some luxury cars have digital gauges available either as standard or optional equipment, and they are expected to become more common on even moderately-priced vehicles in the future.

CUSTOMIZATION

Why are cars making the switch to digital screens?



Aside from the sheer technological wow factor — many of them look like something out of a science fiction movie — it's because they can easily be customized to meet the wishes of the driver.

Unlike mechanical gauges, which can only be fixed in one layout, digital gauges can be redesigned and reconfigured as needed. Most of them offer options for the colors, design and layout that the driver can

change to meet their preferences.

For example, you might be able to switch to a “sport” layout that includes a big tachometer for performance driving, then switch to a “normal” layout with a big

speedometer for more relaxed driving.

You can also pick which information you want to see displayed. You might want navigation info instead of fuel economy info in the lower right hand corner, for example.

A Focus on Efficiency

Improved fuel efficiency is driving many buyers to look into purchasing a new car. From giant SUVs and pickup trucks to small economy cars, nearly every new model has been engineered for better gas mileage in recent years.

It's not just about hybrids and electric cars, either. While those models tend to generate the biggest headlines and are the most Earth-friendly to drive, ordinary gas and diesel models are being designed with lighter bodies and more fuel-efficient engines these days.

For many buyers, especially people trading in their older gas guzzlers, that can make driving a new car more financially appealing.

Here's a look at some ways auto makers are improving their fuel consumption.

DIESELS

In Europe, where higher taxes result in considerably pricier gasoline than here in the United States, small diesel engines have long been a popular choice because they help drivers save money at the pump.

Now they're starting to become more widely available in America for the same reasons. Efficient diesel engines are offered in more cars and trucks these days, and changes in their design mean they're dramatically quieter and cleaner burning than before.

FEWER CYLINDERS

Full-size SUVs and pickups have long been famous for their gas-guzzling V8s, but they're increasingly becoming available with six-cylinder or smaller engines with turbochargers and other ways to save at the pump.

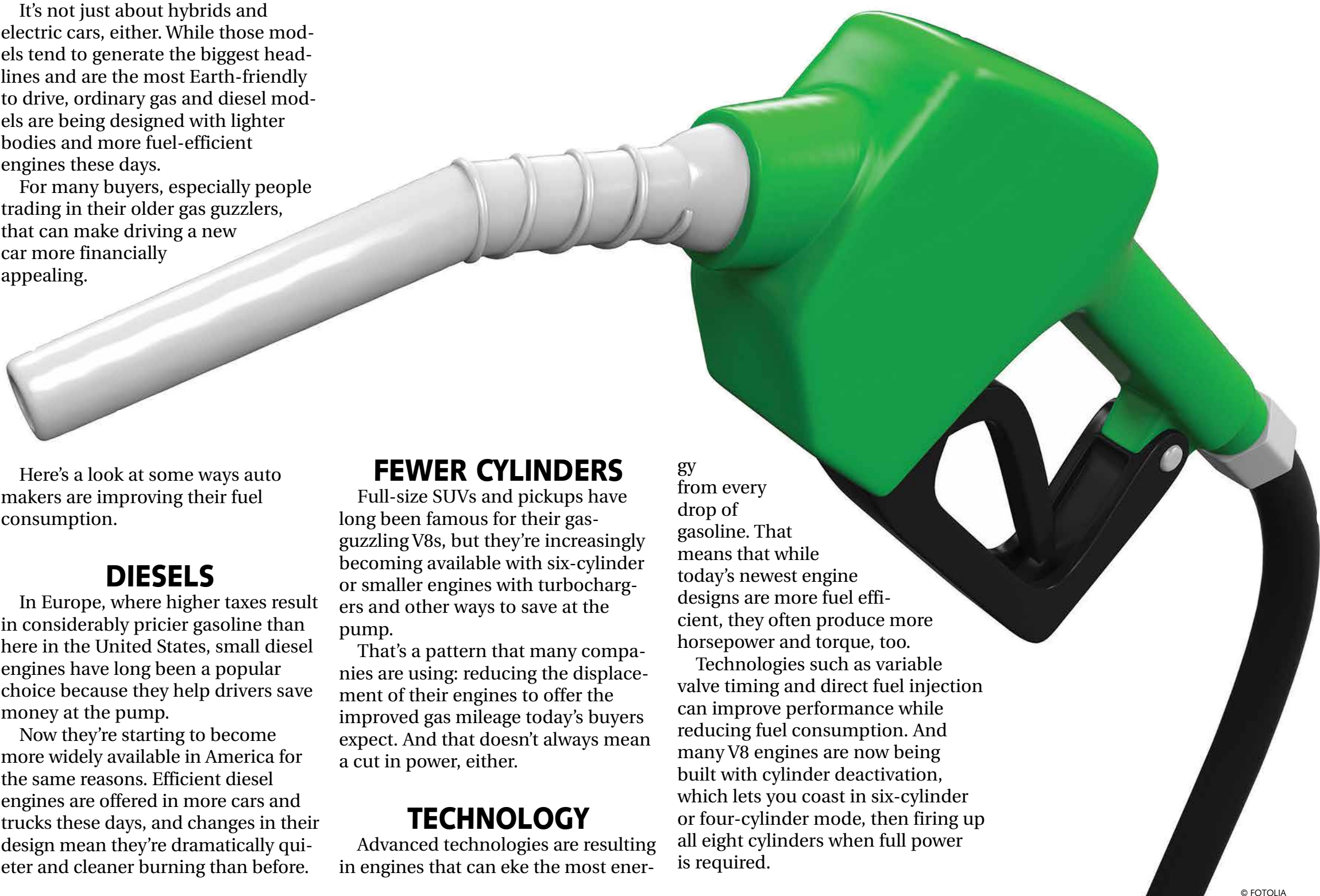
That's a pattern that many companies are using: reducing the displacement of their engines to offer the improved gas mileage today's buyers expect. And that doesn't always mean a cut in power, either.

TECHNOLOGY

Advanced technologies are resulting in engines that can eke the most ener-

gy from every drop of gasoline. That means that while today's newest engine designs are more fuel efficient, they often produce more horsepower and torque, too.

Technologies such as variable valve timing and direct fuel injection can improve performance while reducing fuel consumption. And many V8 engines are now being built with cylinder deactivation, which lets you coast in six-cylinder or four-cylinder mode, then firing up all eight cylinders when full power is required.



The Connected Car

If any single trend could define what's happening in the car world right now, it's the continued integration of vehicles and consumer electronics.

With each passing year, cars are becoming more like smartphones and computers. From bigger, more full-featured digital displays to new ways to bring information and entertainment into the cabin, today's cars are more connected than ever before.

PHONE FEATURES

One of the most common features on new cars — even many bargain-priced models — is the ability to link with your cell phone to make calls, play music and often access your contact list.

Using either a wired USB connection or a wireless Bluetooth connection, most cars have some way of working with your smartphone to communicate. Some will even read your text messages through the speakers, operate via voice control and let you control your phone using buttons on the steering wheel.

APPS

Another trend is the extensive use of apps, both in the car and through your phone.

Many cars can run a limited number of apps through the car's digital display. Streaming digital music through Pandora is one of the more widespread examples.

Some car companies are developing their own smartphone apps, too, that let you interact with your car through your phone. They might remind you when your car needs service, for example, or even be able to unlock your doors remotely.

This is cutting-edge technology, so it varies widely between each vehicle and manufacturer. It's by no means standardized yet.

WEATHER, TRAFFIC

As wireless data becomes more commonplace, so does the ability for your car to use that data to make your life easier.

Some new cars — particularly those from luxury brands — use real-time traffic data in their

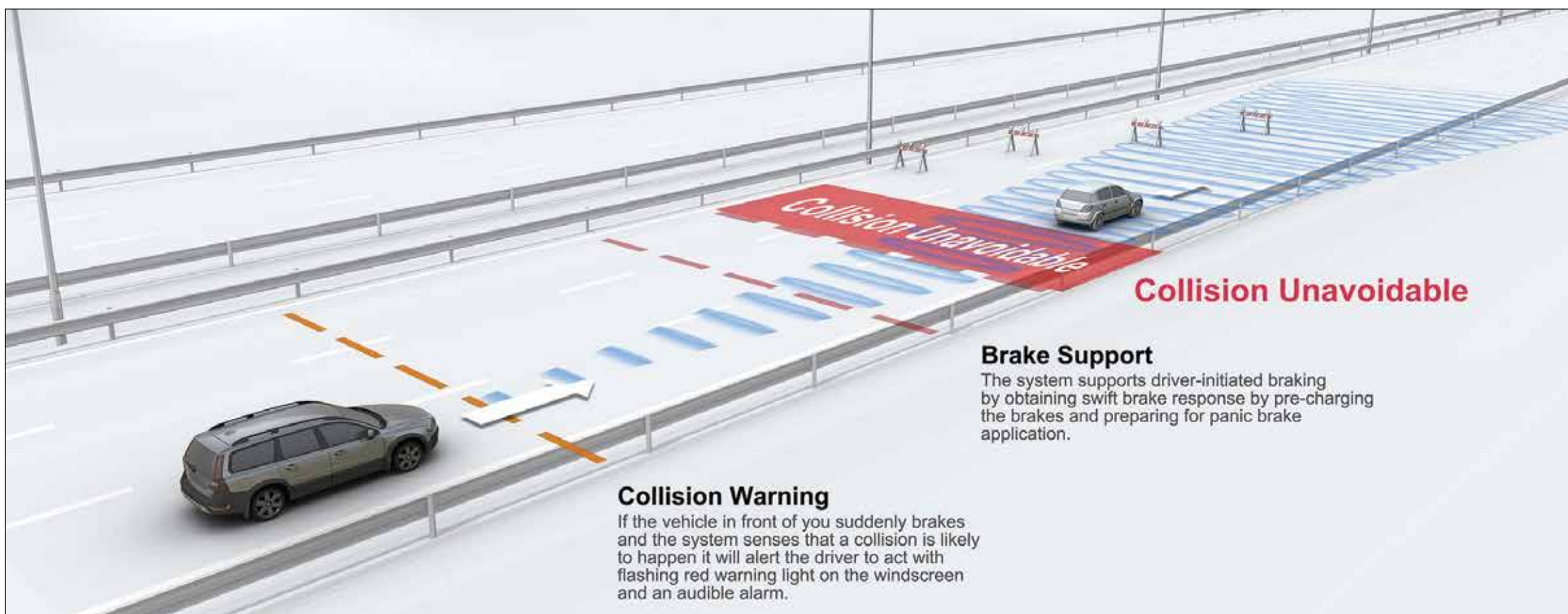
navigation systems to automatically re-route you to avoid congested roads. A few use weather data to let you know about hazardous travel conditions ahead.



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Active Safety Features

For years, safety was engineered in a passive way — meaning systems designed to help you after a crash occurs. Seat belts, air bags and body crumple zones are all examples of passive safety features, which are obviously vitally important when a wreck happens.



More recently, though, new cars are becoming available with active safety features. These are technologies that can either help a driver take steps to avoid a crash or try to automatically mitigate a crash before it occurs.

FORWARD COLLISION ALERT

One active safety feature that is rapidly gaining popularity is forward collision

alert. This system uses sensors in the front of the car to detect when a crash might be imminent, then tries to take steps that will keep the crash from happening.

Some systems simply alert the driver with bright flashing lights and an alarm sound, essentially warning the driver to take quick action.

Other systems take action on their own, by priming the brake pedal for an emergency

stop or perhaps even trying to stop the car automatically. Even if the driver isn't paying attention, this type of system can help to slow or stop the car in an emergency using its own intelligence.

BLIND SPOT SENSORS

Sensors that detect cars in the driver's blind spot are also becoming more popular.

These systems constantly monitor the spots to the left and right rear of the vehicle — the places where it's hard for a driver to see when changing lanes — and will alert you if it senses you might hit a vehicle in the next lane.

ADAPTIVE CRUISE CONTROL

Long available on high-end luxury cars, adaptive cruise control is filtering down to

more mid-priced models and can be an important safety feature for people who spend long stretches of time on "cruise" mode.

Unlike traditional cruise control, which keeps your vehicle traveling at a fixed rate of speed, adaptive cruise control will automatically slow you down or speed you up to match the flow of traffic. It keeps your car a set distance from the vehicle in front of you.

Adaptive Headlights

Perhaps one of the most common-sense features on modern cars, adaptive headlights can help the driver see better on winding roads at night by changing position as you drive.

Unlike traditional headlights, which stay in a fixed position all the time, adaptive headlights will automatically turn with the steering wheel. If you turn to the left, the headlights turn left. If you turn to the right, the headlights turn right.

As a result, your lighting will “follow the road” as you drive, improving your visibility and ultimately making the vehicle safer to drive after dark.

ADVANCED FEATURE

Most widely available on mid- to high-priced luxury vehicles, adaptive headlights have some surprisingly complex technology behind them.

They have to be carefully calibrated and engineered to keep from shining into the eyes

of oncoming drivers. They also use sensors to measure the car’s speed and steering angle to provide just the right amount of left and right adjustment as you drive.

SAFETY IMPROVEMENT

The better visibility from adaptive headlights results in a safer driving experience, a study from the Highway Loss Data Institute suggests. Looking at vehicles from Acura, Mazda, Mercedes-Benz and Volvo, the study found a statistically significant drop in insurance claims for cars with the feature.

Property damage liability claims fell by as much as 10 percent in vehicles with adaptive headlights, the study showed.

NEW LIGHTING TECHNOLOGIES

In addition to adaptive headlights, car companies are turning to new ways of lighting up the road at night. Here are a look at some of them.

HID HEADLIGHTS: These blue-looking lights started appearing on a few luxury cars in the 1990s. With a cleaner, purer color than the more yellow halogen bulbs, they provide better visibility at night that more closely mimics daylight.

LED HEADLIGHTS: One of the newest technologies on the market, LED headlights are much smaller than traditional bulbs, so they allow for more creative car designs. They also can last longer and use much less electricity than ordinary bulbs.

LASER HEADLIGHTS: The next evolution in headlight design could be coming soon from BMW. The German company has announced it is working on laser-powered lights that are even smaller and use less power than LEDs, but they haven’t hit the market yet.



Stronger, Lighter, Safer

Steel, plastic and rubber may be the first materials that come to mind when you think of car construction. As manufacturers look for ways to make their vehicles even better, though, they're often turning to more exotic materials.

By using these advanced construction techniques, engineers are able to create cars that are safer, faster, more fuel efficient and quieter than cars built out of plain steel alone.

HIGH-STRENGTH STEEL

One major trend in new-car construction is the increasing use of special blends of high-strength steel.

This exotic — and more expensive — steel is used in special places to help the car reduce weight without sacrificing strength. This is especially important for crash protection in an era of increased fuel economy standards.

Because this exotic blend of steel is stronger and can be virtually custom made to meet certain specifications, from weight to malleability, it's helping engineers produce cars that are both lighter and more rigid than before.

ALUMINUM

Aluminum is another material being used more extensively in 2015 models, most notably on the new Ford F-150 pickup truck, but also in other vehicles.

Because it is dramatically lighter than steel, aluminum has been used for years on exotic cars to reduce weight and help them drive faster. Now it's becoming a more mainstream material on affordable cars, not just hyper-expensive supercars.

COMPOSITES

While its pricey production costs continue to keep its application limited, high-strength composite materials such as carbon fiber are being rolled out in more cars.

Usually associated with high-performance vehicles, carbon fiber offers incredible strength for its weight. Until it can be mass produced at a low cost, though, it will be

mainly available on low-volume cars that place a premium on performance.

TRACK TESTED

All these materials — particularly aluminum and composites — have been used on the racetrack for decades.

Aluminum has been utilized to make race car bodies since the early stages of motor racing, and carbon fiber is one of the major materials used in Formula One cars since 1981.

In recent years, F1 cars made from carbon fiber have proven to be remarkably safe even in high-speed accidents on the track when combined with other advanced safety features. In the long-term future for cars, it could become a bigger factor for mass-market vehicles as engineers and manufacturers learn how to utilize it at scale.

