Tips for avoiding thieves with keyless systems

Auto manufacturers have long embraced technology that can streamline the automotive experience for drivers. For example, several years ago keyless entry and ignition systems were introduced, initially on high-end vehicles before they became standard on many other models.

Keyless entry systems require a fob, which sends a signal to the receiver inside the vehicle. The fob transmits a low-frequency code to the car's internal computer system, which engages the locks and will allow the driver to push a button on the dashboard or console to start the vehicles. The fob can be stashed away in a pocket or purse and still send the signal, which makes it convenient for drivers. Drivers with arthritis or hand inju-

ries also may find keyless systems an asset.

Because fobs work on wireless systems, hackers potentially can intercept the fob-to-car signal. That enables a thief to not only open the vehicle's doors, but also to potentially drive away as well. Even though the fob/car security pairing is unique and can create billions of codes. researchers at Radboud University in the Netherlands and the University of Birmingham found that, by intercepting the wireless signal just twice, they could narrow down the possible combinations from billions to just 200,000. After that, a computer can figure out the code in just half an hour and unlock the car. Potentially, a thief can gather car codes as drivers enter their vehicles

during the day, then return later to steal a number of cars.

Thieves who purchase signal amplifiers also pose a threat. These amplifiers magnify the reach of the fob signal so that a vehicle owner can be in his or her house with the fob, but the thief can walk up to the car and open it - even if the fob is far enough away that

it should not engage. One way to circumvent this is to buy a signal-blocking pouch that can hold the key fob. Also, an oldschool steering wheel or gear shift lock is an effective way to provide another layer of protection.

Drivers also should be aware of their surroundings as they approach their vehicles. Thieves may count on keyless entry systems to be able to hop into a vehicle once the owner gets within range and drive away.

Vehicle technology thrives to make driving as convenient as possible, but some features also may make things more convenient for prospective thieves

Unique ways to conserve fuel

Defensive driving has long been touted not only as a safe way to operate a motor vehicle, but also a cost-effective one. When driving defensively, drivers are less likely to make sudden stops or accelerate quickly, each of which can waste fuel.

But even the most conservative motorists might want to do even more to conserve fuel. Fortunately, there are many unique and simple ways to conserve fuel and save money.

· Park in the shade. According to Natural Resources Canada, using a vehicle's air conditioning system increases its fuel consumption more than any other auxiliary feature. In fact, NRC notes that air conditioning systems can increase fuel consumption by

as much as 20 percent. That's because vehicle AC systems require engines to work extra hard, which in turn requires them to consume more fuel. By parking in the shade on hot days, drivers won't need to crank their AC systems in order to overcome the summer heat.

· Listen to traffic reports. It's well known that idling greatly decreases fuel economy. Before leaving for work or to run errands around town, tune in to local traffic reports in the hopes that you can avoid potential traffic jams that contribute to the needless consumption of fuel. If there's no way to avoid traffic during your daily commute, consider investing in a vehicle with stop-start technology, which shuts the engine off when your vehicle

comes to a halt before restarting it once you take your foot off the brake. The Union of Concerned Scientists notes that this technology can reduce fuel consumption by as much as 5 percent.

· Make sure your gas cap is tight. A loose gas cap can adversely affect fuel economy. According to Napa®, a loose gas cap is a common contributor to poor fuel economy. Loose gas caps allow fuel vapors to leak and that decreases your vehicle's fuel efficiency. After filling up at the pump, be sure to close the gas cap tightly. Many caps will indicate how many clicks it takes to make sure the cap is closed as tightly as possible. In addition, periodically inspect the cap for cracks or leaks, replacing it if necessary.

Drive distraction-free. Today's cars are technological marvels. But all those bells and whistles can be distracting, and distracted drivers are less likely to pay attention to how they're driving. That can make for unsafe and fuel-inefficient driving. When driving, do your best to minimize distractions, turning off your smartphone and directing all of your focus to the road and how you're navigating it.

Conserving fuel is a goal for many drivers, and that goal can be achieved in a wide variety of ways.





