

Steps in a Pre-Entry Check

Lock Doors

Why?

Adjust Seats for Best Control

Why and how?

Adjust Inside and Outside Mirrors

Why and how?

Fasten and Adjust Safety Belt

Why and how?

Make Sure All Passengers Buckle Up

Why and how?

Adjust Head Restraints

Why and how?

The Area Around the Vehicle

Because of the structural design of the vehicle, the driver is not able to see the spaces immediately around the vehicle. This unnoticeable space consists of the area between the vehicle and the nearest point where the driver can see the ground when seated properly in the driver's seat.

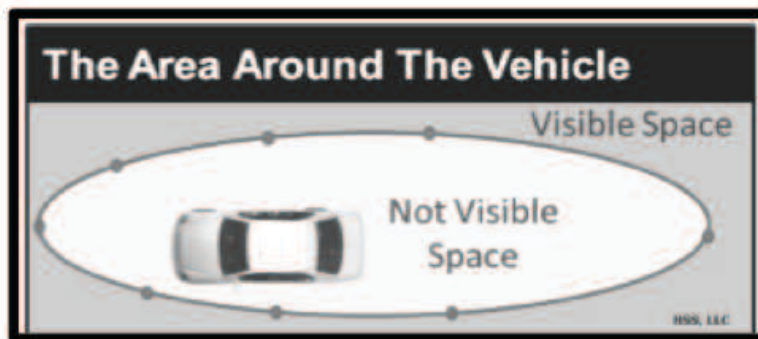
Blind Spots Around Your Vehicle

Front Blind Spot	12 to 15 feet or about one vehicle length
Right Blind Spot	1 ½ to 2 car widths
Left Blind Spot	½ to 1 car width
Rear Blind Spot	About 40 feet or 2 vehicle lengths

To compensate for this space, it is important to learn:

- where the vehicle's unseen boundaries are
- how large they can be
- techniques to help prevent collisions

Proper adjustment of the vehicle's features (mirrors, seat, and head restraint) should help to maximize the driver's view from inside the vehicle in all directions.





Car Fluids

Transmission Fluid

Color, thickness, smell	
Function	
Possible problems if low or empty	

Oil

Color, thickness, smell	
Function	
Possible problems if low or empty	

Coolant

Color, thickness, smell	
Function	
Possible problems if low or empty	

Fuel

Color, thickness, smell	
Function	
Possible problems if low or empty	

For more information visit www.KidsAndCars.org or contact us at email@KidsAndCars.org.

Backover Fact Sheet

In the U.S., 50 children are backed over **EVERY WEEK** because a driver could not see them. Rear view cameras can be installed on any vehicle to end these predictable tragedies.

Blind zones... every vehicle has them

A blind zone is the area behind a vehicle where the driver cannot see even when looking back and using their rear and side view mirrors correctly. (Blind zones are also in front of cars but are not as large)

- Average blind zone = 15 to 25 feet
- Shorter drivers = larger blind zones
- Over 60% of backovers involve a larger vehicle (truck, van, SUV)



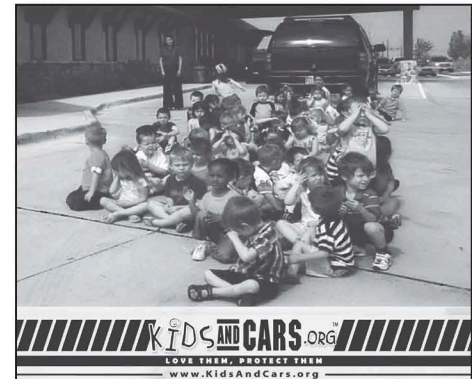
Circumstances

- Backovers take place mainly in driveways and parking lots.
- In over 70% of these incidents, a parent or close relative is the driver behind the wheel.
- **Bye-Bye Syndrome™**: Children don't want to be left behind when they hear the words 'bye-bye.' Many times children follow behind the person who is leaving. The driver is unaware the child snuck out, thinking they are still safe inside. The child stands behind the vehicle where they cannot be seen and is backed over.

Contributing Factors

You cannot avoid hitting something you literally cannot see.

- Most drivers are unaware of the very large, dangerous blind zone that is found behind ALL vehicles.
- Children do not understand the danger of a slow-moving vehicle; they believe if they see the vehicle, the driver can see them.
- Children do not recognize boundaries (property lines, sidewalks, driveways or parking spaces) and are very impulsive.



Age

- The predominant age of backover victims is one year old. (12-23 months). Toddlers have just started walking/running at this age, testing the limits and trying new things.
- Children younger than 5 years old are at the most risk, but children of all ages can be backed over.

Statistics

- On average 232 fatalities and 13,000 injuries occur every year due to backovers.
- Thousands of children are seriously injured or killed every year because a driver backing up was not able to see them behind their vehicle. Many elderly people are also backed over by vehicles.

Rear Visibility Standard:

To reduce the risk of devastating backover crashes involving vulnerable populations (especially very young children), KidsAndCars.org and their partners, worked to prevent these predictable and preventable tragedies for over one decade. A rear visibility standard was issued on April 7, 2014 as mandated by the Cameron Gulbransen Kids Transportation Safety Act.

For more information visit www.KidsAndCars.org or contact us at email@KidsAndCars.org.





The Department of Transportation (DOT) issued the final rule to expand the required field of view for all passenger vehicles weighing less than 10,000 pounds.

This new standard specifies the area behind a vehicle which must be visible to the driver when the vehicle is placed into reverse. The agency anticipates that in the near term, vehicle manufacturers will use rear view camera systems and in vehicle visual displays to meet the requirements of this rule. All motor vehicles sold or leased in the U.S. must comply with this regulation by May 2018.

KidsAndCars.org anticipates that the rear visibility rule will significantly reduce backover crashes. Education and awareness of backover crashes will continue to be critical for decades because most older-model vehicles do not have rear view cameras. All vehicles can and should be retrofitted to include rearview technology.

Prevention/Safety Tips:

KidsAndCars.org urges everyone to install a rear view camera and sensors on their vehicle. Many drivers [incorrectly] believe they have to wait until they purchase a new vehicle to have a rear view camera system; but an after-market rear view camera and/or sensors can be installed on ANY vehicle.

Drivers should also heighten their awareness before engaging a vehicle into reverse; especially when children are present. Young children are impulsive and unpredictable; and they still have very poor judgment and little understanding of danger.

- Always walk around and behind a vehicle prior to moving it.
- Know where your children are. Make sure they move away from your vehicle to a place where they are in full view before moving the car. Verify that another adult is directly supervising children before moving your vehicle.
- Install a rear view camera, back-up sensors and/or additional mirrors on your vehicles. Use these devices in addition to looking around and behind your vehicle carefully to detect if anything is in your path before backing.
- Make sure children hold hands with an adult in parking lots at ALL times. If you have multiple children and not enough hands, create a hand-holding train or fasten the younger children into a stroller and make sure everyone stays together.
- Teach children that “parked” vehicles might move and make sure they understand that the driver might not be able to see them, even if they can see the driver.
- Teach your children to never play in, around or behind a vehicle. The driveway is not a safe place to play.
- If you have an adult passenger with you, ask them to stand outside the vehicle and watch for children or animals as you back out. Ensure they are a safe distance away from the vehicle so that they are not in any danger.
- Be aware that steep inclines and large SUVs, vans and trucks can add to the difficulty of seeing behind a vehicle.
- Keep toys, bikes and other sports equipment out of the driveway.
- Trim landscaping around the driveway to ensure drivers can see the sidewalk, street and pedestrians clearly when backing out of their driveway. Pedestrians also need to be able to see a vehicle pulling out of the driveway.
- Install extra locks on doors inside the home high enough so children cannot reach them and toddlers cannot slip outside on their own.
- Roll down the driver’s side window when backing so you can hear if someone is warning you to stop.
- Be especially careful about keeping children safe in and around cars during busy times, schedule changes and periods of crisis or holidays.

Please share these important safety tips with your childcare providers, teachers, relatives, friends, family and neighbors...

THESE PRECAUTIONS CAN SAVE LIVES.

Pre-Drive Procedures

1 How should the seat be positioned?

2 Where should the inside rearview mirror be aimed?

3 What is the area between the inside mirror view and what we cannot see to either side?

4 How should the outside mirrors be set?

5 How should the head restraint be positioned?





Enhanced Mirror Settings

Advantages

Increased Visibility	With the side mirrors more slightly angled, the driver will gain increased visual coverage of blind spots.
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Less Time	Brief glances to mirrors takes less time than turning head to side.
Night Glare	Night glare is eliminated until vehicle moves into mirror blind zone.

Setting Your Mirrors

Left Mirror	To set the left side mirror, the driver must rest their head against the closed window and set the mirror to barely show the rear edge of the vehicle.
Right Mirror	To set the right side mirror, the driver should lean to the right so the head is directly below the rear view mirror or above the center console. The mirror should be adjusted the same way as the left side, so that the edge of the right side of your vehicle can barely be seen.

Concerns

Alongside	Vehicles visible in side mirrors will be alongside your vehicle.
Head checks	If the driver needs to see alongside the car, a movement of the head to the left window or to the center of the vehicle will give the traditional view as well as the enhanced mirror view.

Mirror Usage

Mirror checks answer three important questions:

- Are there vehicles present?
- If yes, what is their location?
- If yes, what is the size and relative speed of the detected vehicles?

When stopping

Stopping	Anytime a driver prepares to slow or stop, the driver's eyes should scan first to the rear view mirror.
Rear View	Direct attention to the rear view mirror until two cars have stopped behind the vehicle.
Quick	Use multiple, quick glances, not a long stare.

When turning

Before	Mirrors should be checked before any change of speed or position is made to enable assessment and control of rear and side space.
After	The driver should assess the space to the rear as soon as the turn is completed, and then assess the space to the front.

When changing lanes

Changing Lanes	When a driver is attempting to change lanes, they should check mirrors as well as perform head checks before any change of speed or position is made. This enables assessment and control of rear and side space.
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Checking mirror blind areas

Head Checks	Regular side view mirrors, even when angled out an additional 12 to 16 degrees (enhanced setting), do not provide sufficient information to safely make a movement to the side without first making a mirror blind spot check.
Quick	A mirror blind spot check involves making a quick eye movement over the shoulder to the left or right in the direction of intended vehicle movement.

Myths and Facts: Seat Belts

MYTH	FACT
Seat belts are uncomfortable or inconvenient.	Initially people may find that seat belts are uncomfortable, confining or inconvenient; the serious discomfort and inconvenience of motor vehicle crash injury in no way compares to the imaginary discomfort or the inconvenience you may think you feel wearing a seat belt the first few times.
The seat belts in my car don't work.	Newer shoulder belts are made so that you can move comfortably but they will lock up during sudden stops or crashes. Many people mistake this freedom of movement as a broken mechanism. Newer shoulder belts are designed to lock up only when the car changes speed or direction suddenly.
Drivers in air bag – equipped vehicles don't need to wear seat belts.	Air bags provide supplemental protection in frontal crashes, but motorists can slide under them if they are not wearing a seat belt. Air bags will not help in side or rear impact crashes or rollover crashes.
I don't want to be trapped in a fire or underwater.	Crashes involving fire or water happen in only 1/2 of one percent of all crashes. When they do occur, your best chance of surviving rests in remaining conscious, alert, and uninjured. The greatest danger is with the impact that precedes the fire or submersion in water. If you're not using a seat belt, it's very likely that you will be knocked unconscious or severely injured.
I'd rather be thrown clear in a crash.	Being thrown safely clear in a crash is almost impossible. You are more likely to be thrown through the windshield, scraped along the pavement, or even crushed by your own vehicle or another one. The idea of being thrown from a car and gently landing in a grassy area beside the road is pure fantasy. Your best bet during a crash is to stay inside the vehicle, securely held by your seat belt.
Seat belts can hurt you in a crash.	Properly worn seat belts seldom cause injuries. If they do, the injuries are usually surface bruises and are generally less severe than would have been the case without any belt. Without seat belts, you could have been thrown out of the vehicle and severely injured. Sometimes the force of a crash is so great that nothing could have prevented injuries. Injuries in most serious crashes would have been much more severe had seat belts not been worn.
I'm not going far and I won't be going fast.	This is the comment that so many people living in rural areas use when asked why they do not buckle up. Most crash deaths occur within 25 miles of home and at speeds of less than 40 miles per hour.
The chance that I'll have an accident is so small; those things only happen to other people.	It's comfortable to think that accidents only happen to other people; one out of three people will be seriously injured in a car crash sometime during their lives. This is really a significant risk. We never know when it will occur or how it will occur. The answer -- buckle up every trip, every time.
I'm a good driver. It won't happen to me.	You may be a good driver but you cannot always control the other drivers on the road. A drunk driver coming around the next curve may not be a "good driver". Again, you never know what might happen. Buckle up every trip, every time.

Staying Safe

Seat Belt Do's and Don'ts

When properly adjusted, seatbelts are among the most important safety features in a motor vehicle.

Seat Belt Do's	Seat Belt Don'ts
Wear seat belts across the top of your shoulder and over your chest.	Never wear the seat belt loose or twisted.
Wear it low across the hips.	Never wear it under your arm or behind your back.
Check it frequently for a snug fit.	Never wear it riding up over your stomach.
Wear it with your seat in an upright position, your back against it and your feet on the floor.	Never wear it slouching or reclining in your seat.

Head Restraints

Reduce the risk of neck injury caused by whiplash from the impact of a crash.

Head Restraint Do's	Head Restraint Don'ts
Your head restraint should contact the back of your head.	Avoid slouching or leaning forward.

Air Bags

Work in conjunction with safety belts and help absorb crash forces to minimize impact to the body

Air Bag Do's	Air Bag Don'ts
There should be 10-12 inches between the driver's chest and the steering wheel.	Avoid sitting too close or having the air bag directed at your face.

Child Safety

A good driver makes sure that all of their passengers arrive safely, including the youngest and most prone to injury

Infants	Rear-facing car seats until they're at least 12 months old and 20 pounds.
Children 1-3	Forward-facing car seats.
Children 4-7	Must remain in a child safety seat, or a booster seat, until the child is 4'9" or taller.
Children 8 +	Must remain belted at all times.

Maryland's Child Passenger Safety Law

(Effective October 1, 2013)



- Every child under 8 years old must ride in an appropriate child restraint* unless the child is 4 feet, 9 inches or taller.
- Every child from 8 to 16 years old who is not secured in a child restraint must be secured in a vehicle seat belt.

* "Child restraint" includes car seats, booster seats, or other federally approved safety devices.

Protect your children as they ride!

Children under 13 years old should ride in the back seat.

The back seat is the safest.

Questions?

Call Maryland Kids In Safety Seats (KISS)

at 1-800-370-SEAT or (410) 767-6016,

e-mail: dhmf.kiss@maryland.org

or visit us online at www.mdkiss.org



Maryland KISS

Program

Larry Hogan,
Governor

Boyd Rutherford,
Lt. Governor
Van Mitchell,
Secretary, DHMH

Safety, Communication, Comfort and Convenience Devices

Directions: Use this worksheet to determine whether your family's or friend's vehicle is equipped with the following Safety, Communication, Comfort and Convenience devices, and if so equipped, where the control levers, switches or buttons are located.

Equipped	Yes/No	Location of control lever or switch
Tilt steering wheel		
Automatic transmission		
Manual transmission		
Parking brake		
Cruise control		
Mirror controls		
Hazard flashers		
Headlights		
Instrument panel light switch		
Hood release		
Trunk release		
Seat control, manual		
Seat control, electric		
Separate turn indicator lever		
Washer/wiper lever		
Air bag cut-off switch		
Electric door locks		
Childproof rear door locks		
Power windows		
4-wheel drive		



Advances in Vehicle Safety for Today and Tomorrow

Many new technological advances in vehicle integrity are available in cars to lessen the effects of a crash for today's drivers. Some advances are uncommon or will be used in the future.

Active head restraints	Automatically moves forward upon impact to catch the head and increase neck protection.
Adaptive cruise control	Uses radar to monitor and regulate the distance between vehicles. If a crash is imminent, the system will brake, deploy airbags, and tighten safety belts.
Adaptive headlights	Illuminates the area around a corner with a 15-degree range of motion.
Advanced airbags	Isolates and protects various body parts and, in some systems, deploy at different depths or velocity depending on the occupant's size and position, the severity of the crash, and use of the clasped or unclasped safety belt.
Advanced safety belt pretensioners	Tenses up when a collision is imminent and are sometimes paired with seats that automatically adjust for increased crash protection.
Electronic stability control (ESC)	Monitors traction loss and steering angle and automatically applies one or more of the brakes to keep the vehicle on course. ESC helps to prevent the sideways skidding and loss of control that can lead to rollovers, helping drivers to maintain control during emergency maneuvers when their vehicles otherwise might spin out.
Fatigue warning	Monitors the driver's eye blink rate and blink duration and alerts the driver if it detects inattention or drowsiness.
Forward collision warning systems	Alerts the driver when the vehicle is getting too close to a vehicle in front. Some systems are able to brake the vehicle if the driver doesn't stop or steer clear.
Lane departure warning systems	Signals to a driver with alarm or flashing light when the driver's vehicle drifts from its lane by capturing an image of the highway and the lines on either side of the vehicle.
Park assist and back over prevention	Helps drivers park and back the vehicle by using cameras and radar to look for objects located behind a vehicle and by alerting drivers to hazards. Some systems are capable of automatically parallel parking the vehicle.
Side view assist	Uses sensors to monitor the side of the vehicle for vehicles approaching blind spots. A visual alert appears on the side view mirrors if a vehicle is detected. An audible alert activates if the driver signals a lane change when there is a vehicle in the blind spot.

What Am I?

List of Descriptions

1. I automatically turn on at the rear of the vehicle when the driver shifts to reverse. Tell me my color.

1.

2. I have five or more settings. I clean the windshield, front or back, by moving back and forth, sweeping rain, snow, and washer fluid.

2.

3. I am activated by the driver when the car is disabled on the roadside.

3.

4. I will come on and flash if there were a problem with the supplemental restraint system.

4.

5. I am the lever that allows the driver to shift the gears of the transmission.

5.

6. I inform the driver whether the electrical current to the engine and all accessories is normal or abnormal.

6.

7. I would sound a buzzer and flash a dashboard light when the driver forgets to put me on.

7.

8. I allow a parent to secure a child seat with more than the regular safety belt straps.

8.

9. When I am set or engaged I keep the vehicle from rolling when the driver is not in the vehicle.

9.

10. I allow the driver to use me to adjust his position to reach the pedals under the dash area.

10.

11. I inform the driver how fast the vehicle is moving.

11.

12. I have a snowflake on my button that turns me off and on.

12.

13. I alert another person. You must push the hub of the steering wheel to activate me.

13.

14. I make it possible for the driver to check traffic to the rear without turning around and looking.

14.

15. I hold the passengers or driver upright in the vehicle in the event of sudden, hard braking, a swerve, or a crash.

15.

16. When the driver activates me, I keep backseat passengers or kids from opening the windows.

16.

17. I tell how far the vehicle has travelled in its entire life or on a short trip. There are sometimes two of me. One can be reset to 0, and the other cannot.

17.

18. I allow the driver to change the intensity of the dashboard background lighting.

18.

19. I lubricate the engine on the inside. I am brown and should be changed every 3000 to 4000 miles. There is a light on the dash to indicate any problems with my system.

19.

20. I protect the front seat passengers' heads from striking the side window or the side of the vehicle in the event of a side crash.

20.

21. I have five positions. The driver uses a key to turn me and start or turn off the engine.

21.

22. I tell the driver if the engine is overheating.

22.

23. I indicate the gas level in the fuel tank when the vehicle is on.

23.

24. Part of me is red and part of me is blue. I indicate cold or hot in the passenger compartment.

24.

25. I allow the driver to maintain a desired speed so the driver can remove their foot from the accelerator pedal

25.



Review: Unit Three

1 What is a pre-entry check?

2 What are some of the things a pre-entry check is designed to find?

3 What are some reasons why a seat belt is important for safe driving?

4 What are some examples of vehicle control equipment?

When is it appropriate to use that equipment?

5 What is vehicle communication equipment? When is it appropriate to use?

6 What is a parking brake and how does a driver use one?

7 What types of gauges are found on the instrument panel?

What kinds of information do those gauges provide?

8 How should a driver wear his/her seat belt?

9 How should a head restraint be positioned?

10 What does a red indicator light mean?

11 What does a yellow/orange indicator light mean?

12 What does a blue/green indicator light mean?
