



Tailgate Safety Talk

Information You Can Use to Prevent Accidents & Injuries

Controlling Speed & Your Ability to Stop

Driving too fast is a major cause of fatal crashes. You must adjust your speed depending on driving conditions. These include traction, curves, visibility, traffic, and hills. There are three things that add up to total stopping distance:

PERCEPTION DISTANCE: The distance your vehicle travels from the time your eyes see a hazard until your brain recognizes it. For an alert driver, this is about 3/4 second. At 55mph, you travel 60 feet in 3/4 second.

REACTION DISTANCE: The distance traveled from the time your brain tells your foot to move from the accelerator until your foot is actually pushing the brake pedal. The average driver has a reaction time of 3/4 second. This accounts for an additional 60 feet traveled at 55mph.

BRAKING DISTANCE: The distance it takes to stop once the brakes are put on. At 55mph on dry pavement with good brakes it can take a heavy vehicle about 170 feet to stop. This takes about 4 1/2 seconds.

TOTAL STOPPING DISTANCE: At 55mph it will take about six seconds to stop and your vehicle will travel about the distance of a football field, 290 feet.

Speed affects stopping distance. Whenever you double your speed, it takes about four times as much distance to stop and your vehicle will have four times the destructive power if it crashes. If you slow down, you can gain a lot in reduced braking distance.

Vehicle weight affects stopping distance. The heavier the vehicle, the more work the brakes must do to stop it and the more heat they absorb. However, the brakes, tires, springs, and shock absorbers are designed to work best when the vehicle is fully loaded. *Empty* trucks actually require *greater* stopping distances because an empty vehicle has less traction. It can bounce and lock up its wheels, giving much poorer braking.

You can't steer or brake a vehicle unless you have traction. Traction is friction between the tires and the road. You are probably quite familiar with the road conditions that reduce traction and call for lower speeds.

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Slippery surfaces. When the road is slippery, you must drive slower to be able to stop in the same distance on a dry road. Wet roads can easily double stopping distance. You may need to slow from 55mph to 35mph. On packed snow, reduce speed by half or more and if the surface is icy, reduce speed to a crawl.

Remember that shaded parts of the road will remain icy and slippery long after open areas have melted. Bridges freeze before the road. Slight melting will make ice wet and much more slippery. Black ice is clear enough that you can see the road underneath it. It makes the road look wet. Any time the temperature is below freezing and the road looks wet, watch out for black ice.

Right after it starts to rain, the water mixes with oil left on the road by other vehicles. This makes the road very slippery. If the rain continues, it will wash the oil away.

Hydroplaning. You know the feeling. The tires of your vehicle lose contact with the road and you can't steer or brake. You can get control by releasing the accelerator, but don't use the brakes to slow down. It doesn't take a lot of water to cause hydroplaning. It can happen at speeds as low as 30mph if there's a lot of water. It's also more likely if tire pressure is low or the tread is worn.

Speed and curves. You've got to adjust your speed for curves in the road. If you take a curve too fast, two things can happen. The tires lose their traction and continue straight ahead, so you skid off the road. Or, the tires may keep their traction and the vehicle rolls over. Slow to a safe speed *before* you enter a curve. Braking in a curve is dangerous because it's easier to lock the wheels and cause a skid.

Speed on downgrades. Your vehicle's speed will increase on downgrades because of gravity. Your most important objective is to select and maintain a speed that is not too fast for:

- Total weight of the vehicle and load.
- Length of the grade.
- Steepness of the grade.
- Road conditions.
- Weather.

You've got to use the braking effect of the engine as the principal way of controlling your speed on downgrades. Remember that the braking effect of the engine is greatest when it is near the governed RPMs and the transmission in the lower gears. Save your brakes so you will be able to slow or stop as required by road and traffic conditions.

Users of this tailgate talk are advised to determine the suitability of the information as it applies to local situations and work practices and its conformance with applicable laws and regulations.