

Employee Handout - Extreme driving conditions

1. Discuss the hazards caused by rain and fog.

Content: Rain. Roads become very slippery when rain first starts to fall. As rain begins to fall, it mixes with oils that cover the road's surface. Until additional rain breaks down and washes away this oily mixture, the pavement is very slippery. This condition can last anywhere from a few minutes to a few hours.

When traveling in rain, a driver should reduce his/her vehicle's speed, allow for more space behind other vehicles, and allow for more time to stop.

A heavy rain that causes water to stand on the roadway can also cause a vehicle to hydroplane. The faster a vehicle travels on standing water the greater the chance of hydroplaning. This is due to the fact that traction is only present when a vehicle's tires have contact with the road. If the tires are riding on a wall of water, they lose traction. The best way to prevent hydroplaning is by slowing down.

Fog. Reduced visibility is the challenge drivers deal with in foggy conditions. Slowing down is key. A safe speed in fog may be 20 - 30 mph if a driver can see six car lengths ahead. If a driver can see only two car lengths ahead he/she may need to slow down to 10 - 15 mph. How fast a vehicle should travel in foggy conditions is often best left to a driver's judgement.

Low beam headlights should be used in the fog. They serve two purposes. As well as helping the driver see the roadway, low beam headlights allow others to see your driver's vehicle.

High beam headlights should never be used in the fog. The water particles that make up fog tend to reflect more light back at the driver than on the roadway when high beam headlights are used.

A driver should make use of his/her vehicle's windshield wipers. Part of the visibility problem caused by fog is the fine mist that is left on a vehicle's windshield.

If visibility is extremely poor the driver should find a safe place to pull his/her vehicle over such as a rest stop until visibility improves.

Notes: Hand out and review all company policies and procedures dealing with rainy and foggy conditions. Answer any questions your drivers may have in regards to what they should do and how they should proceed when conditions prohibit or make travel dangerous.

Exercises: None

2. Discuss the hazards caused by snow and ice.

Content: Snow. The type of snow on the road will play a part in how a driver should approach maneuvering his/her vehicle.

A light powdery snow will blow off the road causing few problems. If there is enough powder to cover the road it will form a slick, smooth surface.

A heavier, slushy snow can affect vehicle control. If the snow becomes hard packed it can cause an ice hazard.

A driver should start out slowly and smoothly when driving on a snowy road. If the drive wheels slip, the driver should take his/her foot off the accelerator and start the maneuver over.

Steering and braking should also be done with care to minimize skids. In extremely severe conditions, chains will help improve a rig's traction.

Falling snow can also reduce visibility. The addition of wind can cause even greater visibility problems. As well as making it harder to see the road, wind-driven snow can obscure signs, road markings, and off ramps.

The use of low beam headlights can help others see your driver's rig. As with foggy conditions, never use high beam headlights. They actually reduce a driver's visibility.

Slowing down and increasing following distance are important for both visibility and vehicle control purposes.

Another danger posed by driving in snow is called "snow hypnosis." This is caused when a driver travels directly into a heavy snow and begins to stare at snowflakes. This can have a hypnotic effect on a driver, especially at night.

Ice. An icy road can be even more dangerous than a snowy road. All drivers need to be alert for changes in a road's surface that may affect traction.

Probably the most dangerous icing condition is black ice. What makes black ice dangerous is the fact that most drivers aren't aware of black ice until it is too late.

Black ice forms when temperatures drop rapidly and any moisture on the road freezes into a smooth, nearly invisible, slippery surface.

On cold days when the road is wet, drivers should keep an eye on the spray thrown from other vehicles. If this spray suddenly stops, black ice may be forming.

Bridges and overpasses can be dangerous when conditions are right for ice to form. Ice forms first on bridges and overpasses. This happens because air can circulate both above and below the surface of the bridge or overpass. This causes the temperature to drop more rapidly than on a normal road.

Braking distance is also a concern when traveling in icy conditions. Depending on temperature and road conditions, braking distance can increase four to ten times that on a dry road.

When it comes to safe braking in icy conditions follow the directions provided by the manufacturer of your vehicle. Braking technique varies depending on the type of brakes on vehicle.

Notes: An on-the-road or range lesson is probably the best way to present this portion of the lesson. If this isn't practical include the use of a model (toy) truck in your discussion. Use the truck to illustrate following distance and how certain road conditions may affect vehicle handling.

Review braking techniques that are applicable to the types of vehicles your drivers are operating. If your drivers operate in places where road conditions require chains, go over the chaining requirements of those areas. Also hand out and review any company policy that deals with operating in adverse conditions.

Exercises: None

3. Discuss the hazards caused by sun glare.

Content: Glare from the sun can reduce visibility, even blind a driver for several seconds. Sun glare happens most often within an hour and a half after sunrise or just before sunset. At these times of day the sun is low enough in the sky to fall directly in a driver's line of sight. The best way to reduce sun glare is by wearing sunglasses and using a sun visor.

Notes:

Exercises: None