

## MATCHING SPEED TO THE ROAD SURFACE

You cannot steer or brake a vehicle unless you have traction. Traction is friction between the tires and the road. These are some of the road conditions which reduce traction and call for lower speeds:

**Slippery Surfaces.** It will take longer to stop and it will be harder to turn without skidding when the road is slippery. You must drive slower to be able to stop in the same distance as on a dry road. Wet roads can double the stopping distance. Reduce speed by about one third (i.e., slow from 55 mph to about 35 mph) on a wet road. On packed snow, reduce speed by half, or more. If the surface is icy, reduce speed to a crawl and stop driving as soon as you can safely do so to install chains, if necessary.



Sometimes it is difficult to know if the road is slippery. Here are some examples of slippery roads:

- **Shaded areas.** Shady parts of the road will remain icy and slippery long after open areas have melted.
- **Bridges.** When the temperature drops, bridges will freeze before the road will. Be especially careful when the temperature is close to 32° F.
- **Melting ice.** Slight melting will make ice wet. Wet ice is much more slippery than ice that is not wet.
- **Black ice.** Black ice is a thin layer that is so clear 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.
- **Vehicle icing.** An easy way to check for ice is to open the window and feel the front of the mirror, mirror support, or antenna. If there is ice on the mirror, the road surface is probably starting to ice up.

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

**Hydroplaning.** In some weather, water or slush collects on the road. When this happens, your vehicle can hydroplane. It is like water skiing; the tires lose their contact with the road and have little or no traction. You may not be able to steer or brake. You can regain control by releasing the accelerator and pushing in the clutch. This will slow your vehicle and let the wheels turn freely. If the vehicle is hydroplaning, do not use the brakes to slow down. If the drive wheels start to skid, push in the clutch to let them turn freely.

It does not take a lot of water to cause hydroplaning. Hydroplaning can occur at speeds as low as 30 mph if there is a lot of water. It is more likely to occur if tire pressure is low or the tread is worn. (The grooves in a tire carry away the water; if they aren't deep, they don't work well.) Be especially careful driving through puddles. Puddles are often deep enough to cause hydroplaning.

## SPEED AND CURVES

Drivers must adjust their speed for curves in the road. If you take a curve too fast, two things can happen. The tires can lose their traction and continue straight ahead, so you skid off the road. Or, the tires may keep their traction and the vehicle will roll over. Tests have shown that trucks with a high center of gravity can roll over traveling at the posted speed limit for the curve.

Slow to a safe speed before you enter a curve. Braking in a curve is dangerous because it is easier to lock the wheels and cause a skid. Slow down as needed—never exceed the posted speed limit for the curve. (The speed zone signs posted at curves are for smaller vehicles.) Drive in a gear that will let you accelerate slightly in the curve. This will help you keep control.