

STATISTICALLY SPEAKING

Weather-related crashes are defined as those crashes that occur in adverse weather (i.e., rain, sleet, snow, and/or fog) or on slick pavement (i.e., wet pavement, snowy/slushy pavement, or icy pavement). In 2010, nearly 7,400 people are killed and over 673,000 people are injured in weather-related crashes each year.

– Federal Highway Administration (FHWA)

Most weather-related crashes happen on wet pavement; 75% of weather-related crashes occur on wet pavement. We can further divide that group:

- 47% involved active rainfall;
- 15% involve snow or sleet;
- 13% involve icy pavement;
- 11% involve a mix (i.e. snowy and/or slushy pavement)

INTRODUCTION

Hydroplaning occurs when a layer of water builds up between your vehicle's tires and the road surface causing a loss of traction and possible loss of control. Your vehicle's tires enable you to start, stop, change speed and turn your vehicle, but only if they can grip the road. Normally tires push away rain, snow and mud, but under some circumstances, a tire may encounter more water than it can brush aside. When a tire can no longer move the water aside, the water pressure in front of the wheel forces a wedge of water under the leading edge of the tire. This causes the tire to lift from the road surface. The tire then skates on a sheet of water with little, if any, direct road contact. When your vehicle's tires actually lift up off of the road, your vehicle loses traction and it becomes uncontrollable. Without your tire in proper contact with the road, your ability to steer, brake or accelerate is compromised. Under extreme circumstances, most commonly excessive speed, it is possible to have multiple tires hydroplane. This condition could cause the vehicle to lose directional control and slide until it either collides with an obstacle, or slows enough that one or more tires contact the road again and friction is regained.

FACTORS THAT CONTRIBUTE TO HYDROPLANING

When you change speed or direction, your vehicle makes it happen through the tire's contact with the road. Some conditions can affect your tire's ability to grip the road:

- **Inadequate tread depth** – the grooves on the tires channel water, snow and slush away so that the treads can grip. If the tire is balding (the grooves are too shallow or non-existent), then the tire can spin without effectively gripping the road.
- **Speed** – as your vehicle's velocity increases, the tires can actually ride up on top of snow, ice, and water. As the wheels turn faster, they lose their ability to channel away water, snow or slush. Some extreme sports fanatics actually drive their motorbikes and quad-wheelers across the surfaces of small ponds by gaining enough speed and momentum before launching out onto the water's surface.
- **Water depth** – deeper sheets of water (caused by poor drainage or extra heavy downpours of rain) increase the likelihood of hydroplaning. Loss of traction can occur on merely wet roads, but all drivers should be extra careful when they encounter large sheets of standing water.
- **Under inflation** – under inflated tires can't effectively push away water (and running on under inflated tires lowers your fuel economy, too!)

WHEN IS HYDROPLANING LIKELY?

There are several possible signs that could signal that your vehicle is beginning to lose (or has lost) control:

- If your drive wheels are hydroplaning, you might notice an increase in engine RPM's as the wheels spin on top of the water.

- When driving straight, you may feel a “wobble” in the response of the steering mechanism, or you may feel that the steering is “soft” or “loose”. Don’t try to swerve to see if you’re hydroplaning – it could lead to a crash.
- If you don’t see your tire’s tracks immediately behind you (in the mirror) it may be due to the tires not cutting through the water effectively. Typically, your tires will cut through the water, pushing it away and leaving tracks behind your vehicle. If you don’t see tracks, you may want to slow down to see if that action produces a track.
- Any sideward motion (skidding, fishtailing, etc.) as you navigate curves may be a strong indicator that you’re hydroplaning.

WHAT IF YOU START HYDROPLANING?

If you feel you’re losing control, slow down by taking your foot off of the accelerator – do not rush to the brake pedal. Remember, your vehicle is riding on top of the water – a sudden application of brakes could lock the wheels, contribute to a skid or general loss of control. As the tires slow down, you’ll recover traction.

Don’t make sudden moves with the steering wheel (if already under control) – if in a slide, allow the vehicle to slow down to get traction and make gradual moves instead of sharp, sudden movements. As your tires regain traction, you’ll reestablish control.

AVOIDING HYDROPLANING

You can avoid hydroplaning with good maintenance practices, slowing down in extreme weather and by eliminating distractions while driving (allowing you to concentrate on the feel of the vehicle and it’s sounds).

- Take your foot off of the accelerator and allow your vehicle to slow down gradually. If you immediately hit the brakes, you may simply lock your wheels and slide. If you have Antilock Brakes, follow the directions offered by the manufacturer for dealing with these systems and conditions.
- Slow down before running across large puddles (bodies of standing water on the road surface).
- Slow down when dealing with extra heavy downpours of rain – the water may not be able to run off of the highway surface quickly enough and it may provide an ideal surface for hydroplaning.
- Before you encounter hydroplaning conditions – make sure your vehicle is in top condition: check tire pressure; tread depth and condition; use the right tire design for your vehicle and type of driving.
- Don’t use “cruise control” when conditions are ideal for hydroplaning. You wouldn’t want your vehicle thinking that it should speed up when the tires lose contact with the road surface (your speed may drop as you ride up on top of the water)

WE’RE HERE TO HELP!

If you’d like more information regarding highway/weather safety please contact us



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