



What to do if your car Aquaplanes

What is Aquaplaning?

A vehicle can only aquaplane if the two main causes are present; namely, Speed and Water. Take away the water or reduce the speed and you take away the risk of aquaplaning. Skidding in wet conditions while preserving some traction (some of the tyres rubber is touching the road surface) is not aquaplaning.

Aquaplaning is where the vehicles four wheels lose all traction by being lifted off the road surface and on to a cushion of water. The vehicle behaves as though it has a mind of its own with the driver feeling the vehicle is on water-skis. The result can be a terrifying coaster ride that seldom has a happy ending.

How does aquaplaning occur?

Aquaplaning occurs when the water in front of your tyres builds up faster than your vehicles tyres can handle. For example, when driving through a flooded road or pools of water, the surface of the tyre must move the water out of the way for the tyre to stay in contact with the road. The tyre compresses some of the water to the sides, and forces the remaining water through the tyre treads to the rear of the vehicle.

Typically on a family car, a patch of rubber no bigger than a size nine mans shoe, is the only contact between the cars tyres and the road surface. In moderate rainfall on a smooth road surface at a speed of 60 mph, each tyre has to displace about a gallon of water every second. Each gripping element of the tread is on the ground for only 1/150th of a second; during this time it must displace the bulk of the water, driving through the remaining thin film of water, and then begin to grip the road surface. On good tyres with a moderate rate of rainfall on a well-drained road surface; aquaplaning rarely occurs below 55 mph. However, if any of the above conditions are not met, aquaplaning can happen at speeds as low as 35 mph.

The Four main elements that contribute to aquaplaning:

- **Speed.** The faster you travel in wet conditions, the less grip your tyres have. If a car travelling at a speed of 30mph with good tyres hits a patch of water at a depth of 5cm-2in the chances are the tyres will manage to displace enough water to maintain traction. An identical car travelling at 50mph hitting the same patch of water and the likelihood is the car will aquaplane out of control.
- **Tyre condition.** Damaged or worn tyres are unable to spread water efficiently multiplying your chances of aquaplaning. Surface laying water mixed with a soiled road surface, e.g. spilt fuel and oil deposits acts as a lubricant on rubber making worn or bald tyres doubly dangerous. Check your tyres regularly for damage or signs of wear. Keep your tyres properly inflated as per the tyre manufacturers' recommendations. Although the legal tyre depth is 1.6mm; for winter driving RoadDriver recommends you change your tyres when the depth falls below 2.5mm.

- **Water.** The greater the rainfall, the deeper the water, the more likely you will aquaplane. Slow down when on wet roads; stay well back from vehicles with large tyres (the bigger the tyre the more water thrown back into your path). Drive in the middle of your lane to avoid side puddles or pools of water. Keep well back from the vehicle in front but try to follow in their tracks, this will gain more traction as your tyres will have less water to disperse.
- **Road Surface.** In rainfall, a slippery road surface is considerably more prone to vehicles aquaplaning. Mud on the road from building sites or farm tracks are particularly hazardous, as are smooth tarmac surfaces compared to ribbed or grooved concrete surfaces.

How to avoid Aquaplaning

- Check your tyres regularly for wear and tear; ensure your tyres are properly inflated and maintain at least 2.5mm tread on your tyres.
- Slow down on wet roads and stay away from pools of water or puddles. Try to drive in the tyre tracks left by the cars in front of you.
- Do not use cruise control in wet conditions.

What to do if your vehicle Aquaplanes

- It is often difficult to feel the point at which your vehicle starts to aquaplane. Sometimes when you lose traction it is accompanied by an audible rise in the engine revs, likened to depressing the clutch at speed. Other signs can be a sudden lightness of the steering wheel coupled with the back end of the vehicle starting to fishtail.
- Finesse not brute strength is called for in this situation, try to focus on-the-job at hand, staying calm, will help you make the right choices allowing you to safely regain control of your vehicle. If you have cruise control disengage it by using the switch *not the brake pedal*. (In certain circumstances some experts' believe cruise control can contribute to aquaplaning) For this reason RoadDriver recommends that you turn off cruise control while driving in wet conditions.
- While a vehicle is aquaplaning, the driver has little if any directional control. Avoid the temptation to slam on the brakes as this action is likely to throw your car into a violent skid. You should also avoid sudden jerking or turning movements of the steering wheel as this too will exacerbate the situation. If the vehicle is sliding or skidding, *no matter how difficult it is for your brain to accept*, initially at least, let the vehicle find its own pathway while simultaneously easing your foot off the accelerator until you can feel friction and traction returning to your wheels.

- At this point, you can nudge the steering wheel ever so gently in the direction you wish to go and if you need to brake, do so gently with light pumping actions. If your car has ABS, then brake normally.

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