



## Winter Driving: Anti-Lock Braking Systems (ABS)

Stringent safety regulations mean anti-lock braking systems (ABS) are a standard feature on most cars these days. But while most people are aware that their model is equipped with the set-up, few know what it does, or how it should be used if they're in a situation that demands it.

The ABS braking system uses sensors to determine if a wheel is on the verge of locking up during heavy braking. If a wheel tries to lock up, a series of hydraulic valves limits and reduces the braking pressure on the wheel/s to prevent skidding and allow the driver to maintain steering control.

However, ABS shouldn't be used as an excuse to drive into hazards more quickly, or drive closer to the vehicle in front. Plus, on slippery surfaces, bear in mind that ABS doesn't work as well – and on sheet ice, nothing will stop you except crashing into the kerbside or another object. Safe speed is the key for winter driving.

### Braking without ABS In Emergency



Most modern cars are fitted with ABS, but older models – such as those that young drivers may consider as a first car – are unlikely to be equipped with the system. However, drivers can almost create their own ABS in a car that doesn't have it fit-

ted. If you find yourself travelling too quickly in wet or slippery conditions and try to stop suddenly, the wheels are likely to lock up and the car could start to skid. In order to stop without skidding, rhythmically pump your foot up and down on the brake. This will essentially replicate what an ABS system does, albeit nowhere near as effectively. Remember to look where you want the car to go and steer there, and try not to 'panic freeze'.

### ABS: avoiding a collision

ABS is a fantastic aid to driver safety, but only if you know what it does and how to use it in emergencies – which many people don't. The key benefit of the system is that it allows maximum braking force to be applied, yet the driver can still steer the car to avoid a collision.



However, many people in that situation will often 'panic freeze', and continue to look in front of them, steering in a straight line and potentially hitting an obstacle ahead. To stop this from happening, shout 'brake and steer'. Saying this out loud should help you focus your thought process, giving you time to act appropriately to avoid hitting anything.

### Myth #1: ABS is a bad thing in winter conditions.

It is true that even when ABS is operating in slippery conditions, your stopping dis-

tance is likely to be increased. However, ABS prevents wheel lock-up and allows you to continue to steer effectively rather than sliding out of control - and this is usually beneficial when trying to avoid obstacles, people and other cars in an emergency braking situation. It's very unlikely that you'll be able to disable ABS in a modern car so it's best to learn how to use it effectively, understand its limitations and accept that it's a well proven safety system that could save your life.



### Myth #2: You should turn off traction control when it snows

Most traction control systems (such as ETC, DSC, ESP) can reduce engine power and/or apply the brakes in response to spinning wheels. When driving in winter conditions, it is especially beneficial to keep these systems active as they are much more capable of maintaining traction (and keeping you on the road) than most humans. However there are occasions when a reduction in power can hinder progress (for example when stuck in deep snow), and only then should these systems be temporarily switched off. If you have tried pulling away unsuccessfully - try turning the systems off and having another go. If this doesn't work you'll need to consider your options.



ACTIVITY	
1.	Determine whether your vehicle is equipped with ABS and Traction control.
2.	Have your winter tires inspected for tread wear by your mechanic.

**INSTRUCTIONS:** Review the contents of the Toolbox Talk with all participants, ideally as a group. Review the DISCUSSION section, soliciting responses from participants to the questions posed. Where provided, complete the ACTIVITY outlined with the participants, as a means to reinforce key messages provided in the Toolbox Talk. Additional follow-up may be necessary to ensure workers are able to apply the knowledge from this Toolbox Talk in their regular tasks. If there are any questions on the topic provided, please contact your Health & Safety Department representative. Post the completed Toolbox Talk on the Health & Safety Wall at the workplace. Ensure all participants have signed the Daily Huddle form.

