

Safe winter driving

Six hazards of winter driving, and what to do

1. Poor traction

Before you turn off the ignition, move your vehicle back and forth 1 to 2 metres (4-5 feet). This packs the heavy snow for easier starting.

When you are pulling out, use a light foot on the accelerator, easing forward gently. Don't spin your wheels. In deep snow, try turning your wheels from side to side to push the snow.

2. Reduced ability to stop

It takes three to 12 times the distance to stop on ice- and snow-covered roads than on dry roads.

Test studies show that the heavier the vehicle, the greater the stopping distance. The simple answer: leave a greater following distance between you and the vehicle in front. Gearing down of the vehicle also assists in bringing you to a safe stop.

The recommended safe following distance under ideal conditions is one second for each three metres (10 feet) of vehicle length. E.g., an 18-metre tractor-trailer combination following distance is six seconds. Widen this gap in the winter according to the conditions.

3. Starting and stopping

Braking on ice is never easy but as the temperature rises, ice becomes even more slippery. For example, your braking distance can double with a temperature variation from zero to -18° C. Check the feel of the road when you start out and at regular intervals on your trip.

4. Slippery surfaces

The action of tires spinning and sliding on snow and ice polishes the surface. This greatly decreases traction on already hazardous road

surfaces. It happens most often at intersections, on curves, and on hills. The slippery road surface increases braking distances, slows traffic, and presents a severe hazard at intersections. Compensate for it in your driving. Slow down early when you approach a slippery intersection, curve, or hill. You may need to gear down to slow down safely.

Black ice

The road ahead may appear to be black and shiny asphalt. Beware: it may be covered by a thin layer of ice known as black ice. Generally, in the winter, asphalt is a grey-white colour. If you do see a black surface ahead, slow down, and brake smoothly and gently. Proceed with caution.

5. Reduced ability to see and be seen

Before starting your trip, clean off the entire windshield and all the windows. Wipe off the headlights, stop and tail lights, and turn signals so that others can see you. You may need to do this frequently during a heavy storm.

Road splatter can leave you blind. Use your windshield washer often. To prevent a windshield freeze-up, be sure you use washer fluid that's right for the winter temperatures in your area, and don't dilute it—that will weaken its effectiveness. Before using the washer, prepare the windshield by heating it with a full blast of the defroster. Run your heater and defroster for a few minutes before you start out. You'll prevent sudden fogging of your windshield.

At night, stop occasionally to clean off the headlights.

In fog or heavy snowfall, keep lights on low beam and adjust your speed according to the conditions.

6. For tractor-trailer combinations: jackknifing

There are two distinct kinds of jackknifing:

- a tractor jackknife in which the rear of the tractor skids sideways
- a trailer jackknife in which the rear of the trailer comes around.

Facts on jackknifing

Repeated tests have shown that if a jackknife develops beyond 15 degrees, it is almost impossible to recover. A jackknife can go to 15 degrees in one and a half seconds. You must react fast in order to take preventative action and recover control of your vehicle. The faster this 15-degree angle develops, the greater the severity and potential damage of the jackknife.

How to prevent jackknifing

Safe defensive driving and adjusting to conditions offer the best safeguard against jackknifing. Going over a hilltop at 60 km/h to discover a sheet of ice or cars and trucks piled up below invites tragedy. Letting the truck build up speed downhill before a turn or a stop invites danger by having to overbrake, which could result in a skidding or jackknife accident.

Control and recovery

1. The most effective technique for recovery from a jackknife on ice is almost complete reliance on steering with little or no use of accelerator or brakes.
2. A prompt start in correcting a jackknife is important.
3. Experience and practice count. Drivers with the most experience have greater confidence and better control.

Directional control

Directional control is best with all the wheels rolling. The tractor is most likely to jackknife when the drive wheels of the tractor are locked and the front and trailer wheels are rolling. When the trailer wheels are locked, a trailer jackknife can also develop. Brakes on empty vehicles still have all the power necessary for a full load. When the truck is unloaded, it's easy to overbrake. So, when driving on a light or empty unit, brake with extra care.

Overpowering and spinning

Power should be applied cautiously. Spinning the drive wheels risks a jackknife. This can easily occur on icy upgrades and usually results in a tractor jackknife which blocks the road and ties up traffic.

Brake before turning

Jackknifing often develops while braking for a curve. Do your braking or gearing down well before the turn, get down to a safe and easy turning speed, then take the turn with all the wheels rolling.

Techniques for skillful winter driving

- Start smoothly. Don't spin your tires.
- Control your speed. Take it slow. Adjust to the road conditions.
- Take hills cautiously. Reduce speed at the crest of hills so you're prepared for what's on the other side.
- Apply steering control smoothly, avoiding sudden moves leading to a skid.
- Signal your intentions well in advance. Plan lane changes early.
- Watch for reduced clearances at underpasses due to accumulated ice or packed snow.

- Don't tailgate. Leave enough room ahead of you for an unexpected stop.
- Stop safely without ABS (antilock brake system) brakes: a rapid light pumping of the brakes is a recommended way to stop on ice. Note that this method will increase your overall stopping distance.
- Stop safely with ABS brakes: the system will pump the brakes for you if your wheels begin to lock up. This lets you maintain steering control.

A reminder for drivers of vehicles equipped with air brakes:

With air brakes, be careful to avoid reducing the air pressure to a low level.

For long down grades or gentle stops, a feathering application is recommended. Apply the brakes gradually until you feel the wheels begin to lock and then release them slightly. If you start to lose steering control, release the brakes immediately, gear down, and repeat the gradual application. This technique requires more feel than pumping.

Use discretion in gearing down. Too much gearing down on ice may cause drive wheels to slide and start a dangerous side skid or jackknife. Release the clutch immediately and let the wheels roll to correct this condition.

When stopping on slippery surfaces, keep all wheels rolling to maintain steering ability, while at the same time using brakes to get the maximum stopping effort without wheel lock-up.

For more information on driving safely in the winter, visit www.ihsa.ca or call 1-800-263-5024. ●