

## Winter Driving Tips

All considerations spelled out in Walt Brinker's book, "Roadside Survival", still apply, PLUS:

When ice is on roads:

- Do not drive at all on untreated roads unless necessary, and then, only for a limited distance with chains or studded tires. Practice putting on the chains before show time! Use of chains is legal in most states, when necessary, provided they do not damage the highway

When snow (without ice) is on roads:

- All vehicles handle much better in snow with winter tires, instead of all-season tires. So, if you live where snow is on streets regularly, best to outfit the vehicle with winter tires – on all four wheels.
- Stopping distance on snow with all-season tires is more than 4 1/2 times as on either dry or wet pavement.
- Stopping distance on snow with winter tires is more than 2 times as with all-season tires on dry or wet pavement.
- Stopping distance on snow with all-season tires is well over 2 times as with winter tires.
- **Comparison in Nov 2015 Consumer Reports Magazine of the all-wheel drive Honda CRV trying to stop from 60 mph:**
  - Dry Pavement w all-season tires: 134 ft.
  - Wet Pavement w all-season tires: 143 ft.
  - Snowy pavement w winter tires: 310 ft. – over 100 yards
  - Snowy pavement w all-season tires: 668 ft. – over 220 yards

NOTE: Winter tires should be changed back when snow on roads is rare; they wear faster on pavement, and do not perform as well on pavement.

Many drivers (about 85% of those who drive in snow regularly) gamble that their all-season tires will work out, so they don't get winter tires! Short-term solution for snow traction: Wrap zip-ties around tire through gaps in rim.

If you must drive – to prevent sliding off a road into a ditch, or worse:

- Watch speed
- Accelerate and decelerate gradually
- No sudden stops or turns
- If skid, look and steer gently and slightly in the direction you want to go. Be careful to not oversteer; may need to then again steer gently where you want to go in a corrected direction.
- Increase greatly (Three times) your following distances
- Try to avoid stopping, by timing arrivals at stop lights
- Wet roads in shade and on bridges are more likely to be icy
- Do not use cruise control when ice is present or likely to be present. Guaranteed to lose traction and possibly vehicle control when a patch of ice is encountered and cruise control attempts to maintain wheel speed.
- If lose control on ice/black ice on a highway (and little or no snow is present), try using a shoulder (left or right) with grass or gravel to drive on with two same-side wheels, to regain traction and control
- When driving on a snow-covered road, drive in the unpacked snow rather than on the packed snow which is often icy. Unpacked snow usually affords better traction.
- To start in snow, do not use first gear with a manual transmission, or low range with an automatic transmission. The goal is to limit the amount of torque delivered to the tires to make them turn but not break free and spin. If they start

spinning they will dig through snow and will frequently leave the car resting on the snowpack underneath it with zero available traction.

- Some modern cars have a gear setting for snow/mud. Use it.
- Consider using an AWD vehicle, whose only primary advantage is starting from a stop.

#### Preparation for driving on snow/ in cold weather:

- Do not run the engine with the garage door closed to warm up the car - risk of carbon monoxide poisoning.
- Battery may be weak, unable to crank a cold engine. Get battery checked at first sign of weakness.
- For sure, in the winter, always have a good set of jumper cables in the car; best cables are 20 feet long in 4-gauge or 2-gauge thickness (2-gauge is best). Check car's operator manual (or my book) to ensure using the cables safely.
- Option with & without jumper cables: Portable jumper battery (Best model w reasonable size: JNC660)
- Keep at least ½ tank of gas in tank – in case get caught in traffic jam or stuck; full tank is better!
- Clear ice from all windows before start (Scraper. Windshield covers work; so does a garage)
- If windshield is exposed to freezing rain, park overnight w wipers rotated away from glass. For removing “hard ice,” warm up the engine with the defroster on – it'll help you to clear ice from the windshield.
- Clear all piles of snow and ice off hood, top and trunk of vehicle to prevent flying off and causing an accident behind you.
- Proper engine coolant mix: 50/50 antifreeze / water – year-round!
- Windshield washer fluid (get mix which doesn't freeze)
- Ensure wiper blades do not streak. Replace if they do
- Small snow shovel w folding handle
- Tow strap in case slide off road (use carefully – only with eye hooks welded to vehicle's body)
- Tarp (thin, cheap) – in case need to get on ground to place a jack, or hook up a tow strap
- Cell phone with 12-volt charger – can use power from vehicle battery, or portable jumper battery
- Add weight over drive wheels, especially w pickups – which typically have light rear ends. Be careful: too much extra weight can cause a spin-out
- Carry sand or kitty litter (type which does not absorb liquid and become lumpy)
- Warm clothing: coat, hat, scarf, gloves; a blanket in the trunk/car – for “just in case”.
- Carry snack food and bottled water in case of recovery delays after becoming stuck
- Cold weather reduces actual tire pressure: Changes 1 PSI for every change of 10 degrees F. So, check w tire pressure gauge, and adjust w 12-volt compressor
- Clean the headlights and tail lights.

#### If vehicle becomes stuck:

- Stay in vehicle once it is out of traffic (to stay warm) and out of danger of being hit.
- If on freeway, even on a shoulder, when traffic continues to rush by, better to get away from the car since it's likely to get hit by a skidding vehicle
- Check exhaust pipe so it is free and clear of snow
- In case require a recovery using tow strap, have rescue vehicle pull gradually. No jerking, which could break eye hook on either vehicle.
- Run engine for heat 5 minutes/hour to save fuel and charge vehicle's battery. Leave windows cracked to prevent carbon monoxide accumulation. Turn off everything that uses vehicle's battery.
- Slightly better traction gained if let some air out of tires (for a wider footprint), but need to reflate as soon as become unstuck – so best to keep 12-volt compressor in car.