MISSOURI SAFETY CENTER

Winter Preparation & Driving Tips 2012

NOVEMBER 2012

Old man winter can put an extra strain on your vehicle and its systems, as well as creating some hazardous and unpredictable driving conditions. Basic preparation and good decisions can minimize "his" impact on driver and vehicle.

IT STARTS WITH THE DRIVER

- Check the weather and decide if a trip is really necessary
- Let others know the route and destination times
- Always wear seatbelts
- Never drive impaired
- Don't drive fatigued
- Avoid distractions
- Take it slow and easy

VEHICLE PREPARATION

Time for a tune-up

- It's a good idea to check the vehicle's records to see if it's due, or past due for a tune-up. A $50 – $100 tune-up now will seem like a small change later if you become stranded on a cold winter's night.
- Consider giving the cars finish a coat of wax to protect against the salt, snow and ice.

Where the rubber meets the road

- Check tire condition and replace any that are questionable (don't forget the spare). Tread depth and tire pressure are critical for controlling the vehicle in limited traction conditions. A simple method is the tried-&-true "penny test." Simply insert a penny (Lincoln's head first) into the tread of the tire. If the tread doesn't reach the top of Abe's head, the tire should be replaced. You can also use a tread-depth indicator, look for the tire's wear-bars across the tread pattern or ask a certified tire technician.
- Check your tire pressure frequently during the winter months, at least once a week. As the temperature drops so does a tires pressure, as much as one pound per-square-inch (psi) for every ten degree drop in temperature.
- In extreme conditions, consider changing to dedicated winter tires or using studs or chains. Studded tire caution; while studded tires offer improved traction on snow and ice they can reduce traction on dry roads.

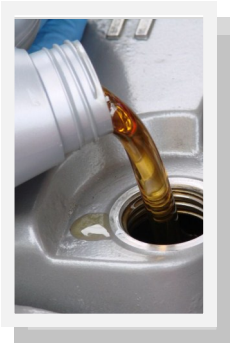
Are you charged up

- Cold weather is hard on all car batteries but especially hard on old ones, so put the vehicle's battery at the top of the check list. Check the condition of the battery's terminals and make sure the connections are tight and free from excessive corrosion (see below for the proper method to jump-start a vehicle).
- Determine if the battery should be replaced. The rule of thumb is simple for battery replacement; it has approximately four years before it begins to lose starting power so consider changing the battery if older than 4 years. However, to be sure have the battery tested by a qualified technician.
- Speaking of charging batteries, make sure your cell phone is fully charged and you have an in-car charging unit handy.

Vehicle Preparation (cont.)

Make sure your vehicle gets plenty of fluids

- Check all of the vehicle's fluids and filters as well as the belts and hoses. This includes fluids/filter/belts/hoses. Don't overlook the windshield washer fluid reservoir. If it's low consider adding some commercial no-freeze fluid.
- This is also a good time to check the windshield wiper blades. They're not very expensive and easy to replace.



Add fluids to your engine.

Don't forget the lights

Inspect and clean the vehicle's headlights, taillights, brake lights, signals, emergency flashers and fog lights.

*Remember, State law requires the headlights be turned on anytime the wipers are required.

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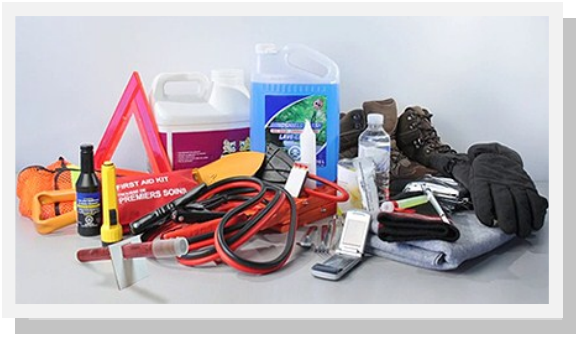
Inside the car

- It's a good idea to keep a variety of spare electrical fuses handy.
- Make sure the heater and defroster work, as well as the fan.
- Check the exhaust system for damage and leaks that could allow dangerous exhaust gases inside the vehicle (carbon monoxide exhaust gas is odorless).
- Winter equipment should include: a quality ice scrapper, de-icer, gloves and a winter emergency kit that includes a small shovel, jumper cables, tow chains or rope, tire chains and a bag of salt or cat litter.

- A winter emergency kit which should include: a flashlight, reflective triangles, first aid kit, blankets or sleeping bag, waterproof matches or other fire starting device, candle, towel, cell phone, multi-tool, large plastic bags, spare winter clothing, fresh drinking water and non-perishable high-energy foods (nuts, dried fruits, energy bars or cans of liquid nourishment).

Last but not least - FUEL.

- Throughout the winter, it's a good idea to keep the gas tank at least half full at all times to avoid gas lines freezing up due to moisture that could exist in the fuel.
- For vehicles that aren't driven frequently, consider a fuel additive like Sta-Bil fuel stabilizer.



Winter Emergency Kit

Winter Driving Tips

Before each trip

- Thoroughly clean the vehicle's windows and clean snow from the hood, roof, trunk and lights. Snow left on the vehicle can blow into the front vents and cause defrosting problems, impairs vision and can melt and re-freeze on the windshield.
- Don't forget the headlights and taillights (see and be seen).

Start out slowly to reduce wheel spin

- On some vehicles, the automatic transmission has a winter (or traction) mode that automatically starts in a higher gear. Other vehicles may have an anti-slip traction features that makes it less likely to spin the tires.
- If the vehicle has a manual transmission, try starting out in second gear so the vehicle is less likely to spin the tires.

Reduce your speed and drive smoothly

- In slippery conditions, tires can lose their grip more easily whether braking, turning, or accelerating. The key is to drive as smoothly as possible, avoiding any sudden actions or quick inputs to steering, braking or acceleration. Remember, the driver controls the input and the car will respond in like fashion.

Allow for longer braking distances

- Begin decelerating and braking earlier than normal to allow for extra time and space and use more gentle pressure on the brake pedal. Rely more on engine braking (natural deceleration when the foot is removed from the gas pedal).

Don't lock your wheels when braking

- Locked wheels can make the vehicle slide or skid and you lose steering (directional) control if the front wheels lock. If the vehicle does not have an antilock braking system (ABS), smoothly and gently apply the brakes repeatedly to avoid having them lock up the wheels.
- If the vehicle has ABS, simply press down on the brake pedal firmly and hold it down. You may experience a vibration or pulsing sensation through the brake pedal, if you feel this, don't let up; the system is doing what it's designed to do.

Try to separate acceleration, braking and/or turning

- Requiring a vehicle to brake and turn, or accelerate and turn while driving in limited traction conditions could cause a loss of control. For instance, when making a turn gently apply the brakes while the vehicle is going straight, then when ready, ease off the brakes and smoothly turn the steering wheel. After you're through the turn, slowly accelerate as needed.

Be ready to correct for a slide

- Should the vehicle's rear end lose traction and begin to slide, gently ease off the accelerator and smoothly turn the steering wheel in the direction of the slide (the direction you want the car to go). Avoid immediately going to the brakes.
- Once the car slows enough to regain traction, it should respond to the steering input (begin to straighten), be prepared to return the steering wheel to a neutral position and brake smoothly.

Don't let four- or all-wheel drive vehicles create a false sense of security

- 4WD and AWD systems only provide extra traction when accelerating. They provide NO advantage when braking or cornering.

Finally, be extra wary of other motorists

- They may not be driving as cautiously as you.

"The key is to drive as smoothly as possible, avoiding any sudden actions or quick inputs to steering, braking or acceleration."

Winter Driving

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Promoting Safety in Missouri and the Nation

If Stranded

- Stay calm and stay put. Your chances of being rescued are usually better if you stay with the car.
- Stay in your car as much as possible to reduce the risk of frostbite or hypothermia.
- Try running your vehicle's engine for heat about once an hour (or every half hour in extreme conditions). Make sure the vehicle's exhaust pipe is clear to prevent the back up of carbon monoxide and leave one window slightly open.
- Set out reflective triangles, flares or tie a bright article of clothing on your antenna to alert others.
- Use your cell phone, or other emergency alter system, to call for help.

If stranded, stay put and use your cell phone to call for help.

Jump-starting a Weak or Dead Battery Correctly

1. Position both vehicles so that they do not touch each other and make sure both vehicles have the same type of electrical system (positively charged or negatively charged). Check the owner's manual of both vehicles to be sure.

2. Make sure both ignitions are off and with both vehicles in park, set the park brakes.

3. You should wear safety glasses and gloves when using jumper cables.

4. Unless given different directions in the owner's manual, connect the jumper cables in this order, with both engines off:

a. Connect one end of the positive (+) jumper-cable to the positive (+) post of the bad battery then connect the other end of the positive jumper-cable to the positive post (+) of the good battery.

b. Connect one end of the negative (-) jumper-cable to the negative post (-) of the good battery then connect the other end of the negative jumper-cable to the engine block, or other grounded source, of the vehicle with the bad battery.

c. Then start the vehicle with the good battery and let it run for a few minutes to help charge the bad battery then try starting the stalled vehicle. Stand a few feet away from the engine compartments.

d. Once started, remove the cables in the reverse order of connection, being very careful not to let the cable clamps touch each other or come in contact with car parts. Also, avoid the fans of the engines (electric fans may run without the engine running).

This general information is provided by the Missouri Safety Center as a public service. It is not meant to replace the specific information in your vehicle's owner's manual or the advice of a certified automotive technician.

Jump-starting a weak or dead battery.