

Maintaining Your Vehicle

As well as cutting down on idling and not driving aggressively, you can **lessen your impact on the environment by keeping your vehicle well maintained.**

Your vehicle should be serviced by a professional, but inspecting your vehicle before you drive is part of driving defensively and improving fuel-efficiency. A vehicle defect found during an inspection can prevent breakdowns that cost time and money.

Refer to your **owner's manual** to find out your **vehicle's maintenance schedule** and its service requirements.

The following are **basic checks and maintenance** you should do or have done on a regular basis:

Steering and Suspension System

Several parts and operating systems are involved in your ability to steer the vehicle, and they are all connected or interrelated. If one or more of the parts is bent, damaged, or too loose, it can affect the entire steering system.

- If play in the **steering wheel** exceeds 5 cm (2 in.) it calls for adjustment or repair to loose or worn parts. Have the system inspected by a trained mechanic.

Shock Absorbers

These are designed to dampen or "**absorb**" the **shock** of a bump and **keep the wheels on the road**. They also help to keep the vehicle level on turns and uneven road surfaces.

- Test your shocks by **pushing down on a corner of the vehicle body** and noting "snubbing" action in both directions. There should be only one slight rebound.

Wheel Alignment

This is the angular setting of the front wheels in relation to the steering and suspension parts. Correct front wheel alignment will ensure a **straightforward course**, and it will **greatly lessen tire wear**.

- Make sure wheels are **aligned and balanced**, and ball joints or Constant Velocity joints are lubricated. Defects in these components can decrease fuel efficiency and thus increase GHG emissions when they are neglected.
- **Tires should be rotated** every 10 000 kilometres to minimize wear, maximize performance and ensure good fuel economy and safety. Consult the owner's manual to determine the pattern for rotating tires.

Tires

Neglecting tire maintenance is not only potentially dangerous, but expensive - tires will need to be replaced sooner because of uneven wear.

- **Check tire pressure** – Buy yourself a decent tire pressure gauge. Checking tire pressure at least once a month is important, especially after temperature changes. Maintain the maximum tire pressure specified by the vehicle manufacturer. Check tires when they are cool, which means when the vehicle has not been driven for at least three hours or it has been driven slowly for less than one km (6/10 of a mile) after standing for three hours or more.
- Inspect your tires while you are doing the **air pressure check**. Look for cuts in the tire carcass, dents in the steel wheels, signs of uneven wear and other signs of damage.
- **Remove snow tires** when they are no longer required to improve fuel economy.

Fast Facts – Each 5% of under-inflation translates into a 1% decrease in fuel efficiency. Under-inflation of 20% will reduce the life of your tire by about 15%. Under-inflated tires are estimated to cost Canadians 400 million litres of fuel annually. At an average fuel price of 71.5¢ per litre for regular unleaded gasoline, that amounts to \$286 million.

Braking System

The braking system of your vehicle is designed for one purpose: to stop the vehicle. It is probably the single most important system in a vehicle. There are two kinds of brakes – **drum and disc**. In the drum brake, shoes are pushed against the inner surface or drums and the resulting friction stops the vehicle. In the disc brake, a disc replaces the drum and calliper pads squeeze the disc when the brakes are applied. Many vehicles are equipped with **anti-lock brakes (ABS)**, which do not stop the vehicle any faster than regular brakes, but make the vehicle easier to control when braking on slippery surfaces.

Some tips on brake care:

- Unless you must make an emergency stop, **do not jam on the brakes**. Anticipate stopping and brake lightly but steadily. Hard application causes wear.
- When driving down steep hills, **shift to a lower gear**. Do not ride the brakes.
- Check the level of **brake fluid** each time the oil is checked. Have brake linings inspected at least once a year.

Engine Oil

Motor oil plays an important role in the performance of your vehicle engine. Without it, your engine will be seriously damaged.

- Use "**Energy Conserving**" motor oils - Oils marked with the "Energy Conserving" label can improve fuel efficiency by up to 3%.
- **Keep the oil clean and the level consistent.** Oil that is worn and dirty cannot do its job of protecting your engine properly. Record the odometer readings of your oil changes and change it at regular intervals.
- Replace the **oil filter** whenever you replace the oil.

Drive Belts

- Check the drive belts for **cracks and wear**, and ensure they have the **proper tension**.
- **Replace the belts** as recommended by the manufacturer.

Windshield Fluid and Wipers

Along with your wipers, windshield washer fluid allows you to:

- Get rid of spray from other vehicles.
- Clear the view during poor weather conditions.
- See and be seen properly by other road users.

While driving:

- Watch **gauges** for signs of trouble.
- If a gauge indicates there is something wrong with your vehicle, **drive off the road into a safe resting area**, as far away as possible from other vehicles.
- Do not operate the vehicle until the problem has been found and repaired.
- **Use your senses** when checking for problems (look, listen, smell, feel).

Air Filter

- **Clean or replace air filters and spark plugs.** Clean air filters and effective spark plugs can help keep fuel use and GHG emissions down. They are also very important for the effective functioning of emissions reduction technology on your vehicle.
- **Follow the manufacturer's specifications.** A dirty air filter can cause an engine to consume over 2% more fuel. Rural vehicles traveling on dusty roads will need air filter changes more often.