TIRE PRESSURE MONITORING SYSTEM (TPMS)

FACTS AND TIPS FOR DRIVERS

It can be very difficult, if not impossible, to tell if tires are under-inflated just by looking at them. Yet most drivers don't check tire pressure regularly. Proper tire pressure saves money, fuel consumption, helps the environment – and saves lives. Having TPMS on vehicles helps to keep Canada's roads safe by giving drivers the critical warning they need when one or more of their tires has low air pressure.

Facts on Maintaining Proper Tire Pressure:

Saving lives – vehicle safety and performance

- Under-inflation is the leading cause of tire failure[2]. Even if your tires look fine, they could be underinflated by as much as 20 per cent[1].
- According to a recent study, about 50 per cent of the vehicles on the road in Canada have at least one tire that is either over or underinflated by more than 10 per cent. In fact, 10 per cent of all vehicles surveyed had at least one tire underinflated by 20 per cent[1].
- When your tires don't have the right amount of air, the sides flex, bend and build heat. Underinflated tires compromise your vehicle's steering, braking and cornering abilities.
- Operating a vehicle with just one tire underinflated by 8 PSI can reduce the life of the tire by 15,000 km[1].

Saving fuel and the environment

- Annually, 643 million litres of extra fuel are consumed by Canadian vehicles because of improper tire maintenance practices. As a result, over one million tonnes of carbon dioxide are unnecessarily released into the environment[4].
- Canadians dispose of 29 million used tires every year, which has a significant impact on landfills. Even modest improvements in extending tire life could have a significant positive impact on our environment as energy used to produce new tires emits harmful pollutants into the atmosphere[4].

Saving money

- Fuel consumption increases by 1 per cent for every 5 per cent of under-inflation. Operating a vehicle with just one tire under-inflated by 8 PSI can reduce the life of the tire by 15,000 km and can increase the vehicle's fuel consumption by 4 per cent[4]. Example:
  - If fuel costs $1.32/litre and it takes approximately 9.1 litres per 100 km = $12.01 / 100 km.
  - Increasing fuel consumption by 4 per cent = $12.47/100 km
  - If you average 22,000 km / year, you would save $100 annually ($2642 vs. $2743) by keeping proper tire pressure
- Maintaining proper tire pressure could save you approximately two weeks of fuel a year, enough to pay for one full set of tires over the average 9-year life of a vehicle[5].
- Under-inflation also reduces tire life. Driving with tires that are under-inflated by 8 PSI will increase tire wear by 16% (approximately 15,000 km). This will hit your pocketbook as you will have to replace tires sooner than you would if they were properly maintained[4].

Tire Pressure Monitoring System

- TPMS will trigger the dashboard symbol to illuminate when one or more tires are under-inflated by 25 per cent.
- TPMS improves your vehicle's handling and stability, decreasing your chances of catastrophic tire failure and having an accident.
- While not currently mandated, an estimated 70 per cent of new vehicles (model year 2007+) sold in Canada are TPMS-equipped[3].
- Starting in 2007, TPMS became a legislated feature on all passenger vehicles sold in the U.S.

Tips for Drivers:

- Get in the habit of manually checking your tire pressure at least once a month or before a long road trip. Even if your vehicle has TPMS installed, regular tire maintenance is the best way to increase your safety.

- The best way to get the most accurate reading is to check your tire pressure before you drive, when the tire is cold.

- To determine if your vehicle has TPMS, look for the TPMS symbol on the dashboard when you first turn your key to the on position. Consult your owner's manual for more information.

- When installing winter tires or buying new wheels, be sure to have TPMS sensors installed in the wheels. Failure to do this will make your TPMS inoperative.

- Large temperature drops, usually during winter, can cause the low tire pressure warning to come on. Have a tire service centre properly check your tire pressure and TPMS if this happens.

- TPMS batteries, expected to last between five and seven years (or approximately 140,000 – 160,000km/year), are encased and can't be replaced. Since some of the first TPMS-equipped vehicles have now been on the road for more than five years, drivers will soon need to see TPMS specialists for maintenance. Once the battery dies, a new TPMS sensor must be installed.

- When the TPMS illuminates on your dashboard, it means one or more of your tires may be at least 25 per cent below recommended inflation pressure. Pull over and check your tire pressure. Once checked, if the tires appear normal, proceed with caution to a tire service centre to have them properly inspected.

Sources
1. Transport Canada
2. Canada Safety Council
3. Schrader International
4. The Rubber Association of Canada
5. AIA Canada