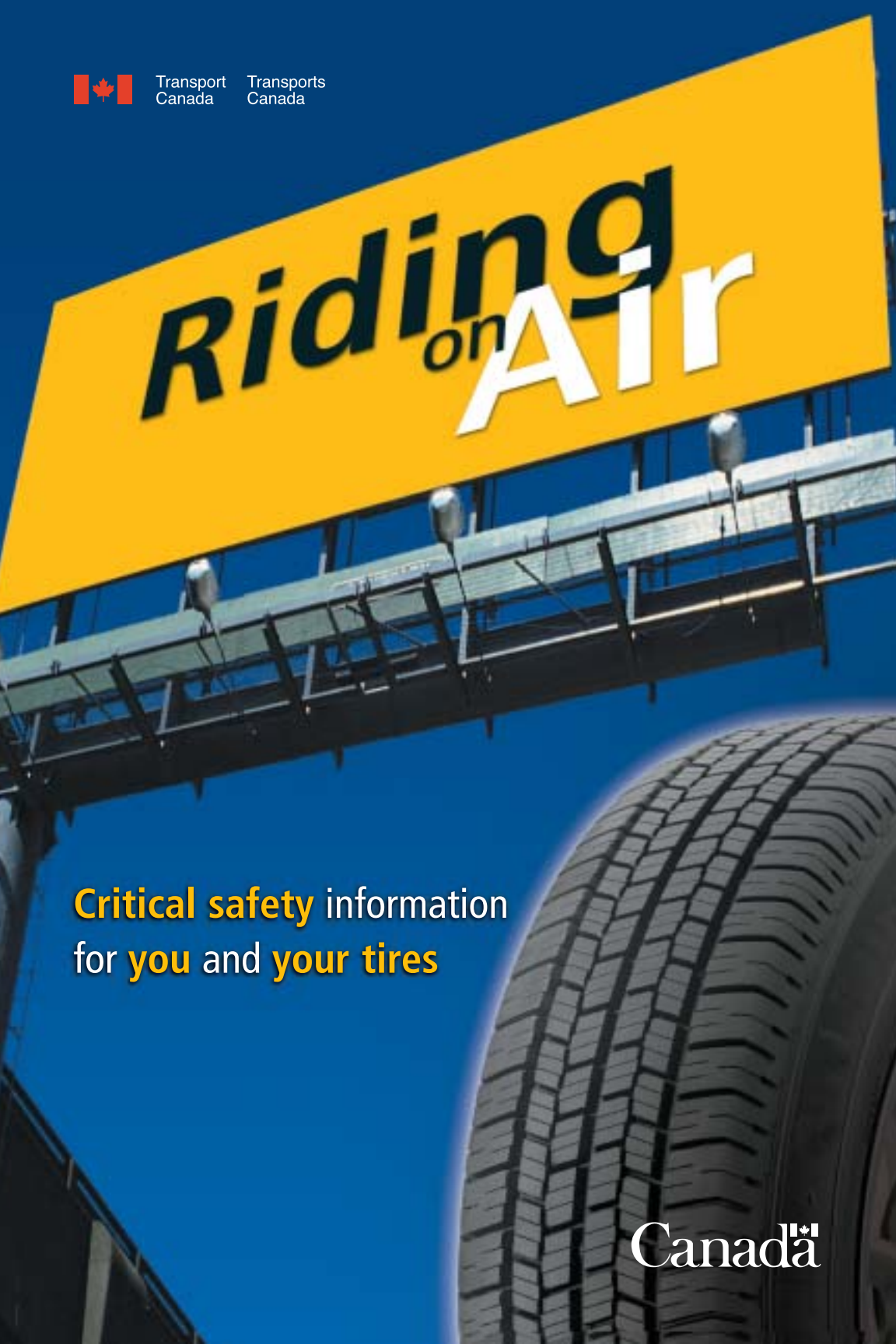

Transport Canada
Transports Canada
Riding on Air
Critical safety information for you and your tires
Canada

Riding on Air

Critical safety information for you and your tires

Your vehicle's tires are engineered to perform safely, day in and day out. But to do their job right, tires need regular maintenance. This pamphlet provides the information you need to maintain your tires properly.

Proper tire inflation is not only critical to the safe operation of your vehicle, but will also improve fuel economy, extend tire life, provide better vehicle handling and help prevent avoidable breakdowns and accidents.

Without proper maintenance, such as correct inflation pressure, tires could suddenly fail, causing you to lose control of your vehicle.

It's up to you!

When was the last time you checked your tires?

Tires are often the most neglected part of a vehicle. They should be checked regularly – **at least once a month**. Tires are your only contact with the pavement. Without good tires that are properly inflated, your vehicle won't accelerate, brake or steer properly. Other safety devices such as Antilock Braking Systems (ABS), Traction Control Systems (TCS) and stability control systems may not function correctly with tires that are not properly inflated. By following a few simple steps you will increase your own safety, as well as improve on fuel economy and prolong the life of your tires, both of which help to save energy and protect the environment.

Inflating your tires

You can't tell if your tires have enough air just by looking at them. According to recent studies, about 70 per cent of the tires on the road are underinflated.

Underinflation will reduce tread life and increase fuel consumption. It can also lead to sudden tire failure. Without enough air, the sides of a tire bend and flex too much. This builds up heat, which can cause serious damage. A tire may be significantly underinflated when it is as little as 28 kiloPascals (kPa) or 4 pounds per square inch (psi) below the recommended pressure; this may represent as little as 10 per cent underinflation.

You should check the pressure of each tire, including your spare, at least once a month.

- Find the recommended pressures for your front, rear and spare tires. The recommended pressures are printed on the tire information label, which is usually located inside the driver's door frame. If you can't find the label, check your owner's manual. While you're

Excessive heat is the number one enemy of a tire. Operating an overloaded or underinflated tire at high speed on a warm summer day is a recipe for tire failure.

- ***Don't overload your vehicle.***
- ***Respect posted speed limits. They exist for your safety!***
- ***Be sure to check the inflation pressure of your tires before heading out.***

The tire information label is usually located inside the driver's door frame.

Be sure to add air to your tires during the winter months. Make sure that both the air pump hose valve and the tire valve are free of snow and other debris that could cause a leak in the tire valve. Don't forget to put the cap back on the tire valve when you're done.

Tire pressure gauges sold by automotive supply stores are generally more accurate than those on gas station air pumps.

checking the pressure of the spare tire, take a moment to ensure that it's securely fastened to the vehicle.

- Use a good-quality tire pressure gauge to check each tire. The pocket gauges sold by automotive supply stores are generally more accurate than those on gas station air pumps.

- Check the pressure when your tires are cool, not after driving a long distance. The tires should be cool if you've just driven no more than 5 km.

- Remember that tires lose pressure when the air temperature gets colder.

Inspecting tires for damage and wear

Check your tires regularly for damage and for signs of excessive or uneven wear. Catching a problem early could save you money and prevent a sudden tire failure.

Uneven and rapid tire wear can be caused by improper wheel alignment or a tire imbalance. Have your wheel alignment and tire balance checked if you see uneven or rapid wear.

If you suspect any problem with your tires, have them inspected by an expert who can recommend the best corrective action.

Rotating your tires

Front and back tires usually wear differently, especially on front wheel drive vehicles. They'll last longer if you rotate them.

- Check your owner's manual or talk to your tire dealer or tire manufacturer to find out how – and how often – the tires on your vehicle should be rotated.
- When mounting the wheels on your vehicle, make sure the wheel nuts are tightened to the

Tires with deep cuts, slits, cracks, blisters or bulges are potentially dangerous and should be replaced. Tires with treads worn down to the same level as the treadwear indicator (1.5 mm or $^{2}/_{32}$ of an inch in depth) must be replaced.

Uneven tread wear can be caused by improper wheel alignment or a tire imbalance.

A tire must be replaced when the tread wears even with the treadwear indicator.

Tires with cuts, cracks, or bulges in the sidewall or in the tread should be replaced.

Working on a vehicle can be dangerous. If you are unfamiliar or uncomfortable with changing the tires, take the vehicle to a service station or dealer to have the tires rotated.

The treadwear indicator marks the minimum allowable tread depth.

manufacturer's specifications. The correct wheel nut tightness can be found in your owner's manual.

Replacing worn tires

As a tire wears, traction is reduced. A tire must be replaced when the tread has worn even with the tread-wear indicator. The treadwear indicator is a small raised bar that runs across the grooves of the tire tread, marking the minimum allowable tread depth. Normally, there are six treadwear indicators spaced evenly around the tire. For optimum traction in wet or snow conditions, replace your tires before they reach the minimum tread depth.

- New tires should be the same size, and have the same load capacity and speed rating as the original tires, which will have this information printed on them. The size also appears on the tire information label, which is usually located inside the driver's door frame.

- To ensure proper vehicle handling, install the same type of tire on all four wheels.

- Your tire retailer can help you select the best type of tire for the kind of driving you do. Automotive publications and manufacturers' Web sites also provide consumer information that may be useful in selecting a tire to suit your needs.

- Register your tires! When you buy new tires, ask your dealer for a copy of the tire registration form. Fill it out and send it in. If there is a recall, the manufacturer will be able to contact you directly.

Winter tires

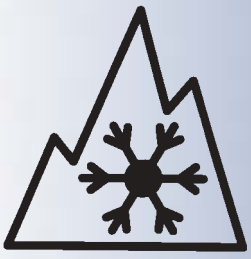
Look for the mountain + snowflake symbol when shopping for snow tires. The Transport Canada Web site (www.tc.gc.ca/roadsafety) contains a list of tires that display the symbol.

Tires marked "M+S" (Mud and Snow), or "all-season" tires that do not have the mountain + snowflake symbol, provide safe performance in most weather conditions, but are less suitable for snow- and ice-covered roads.

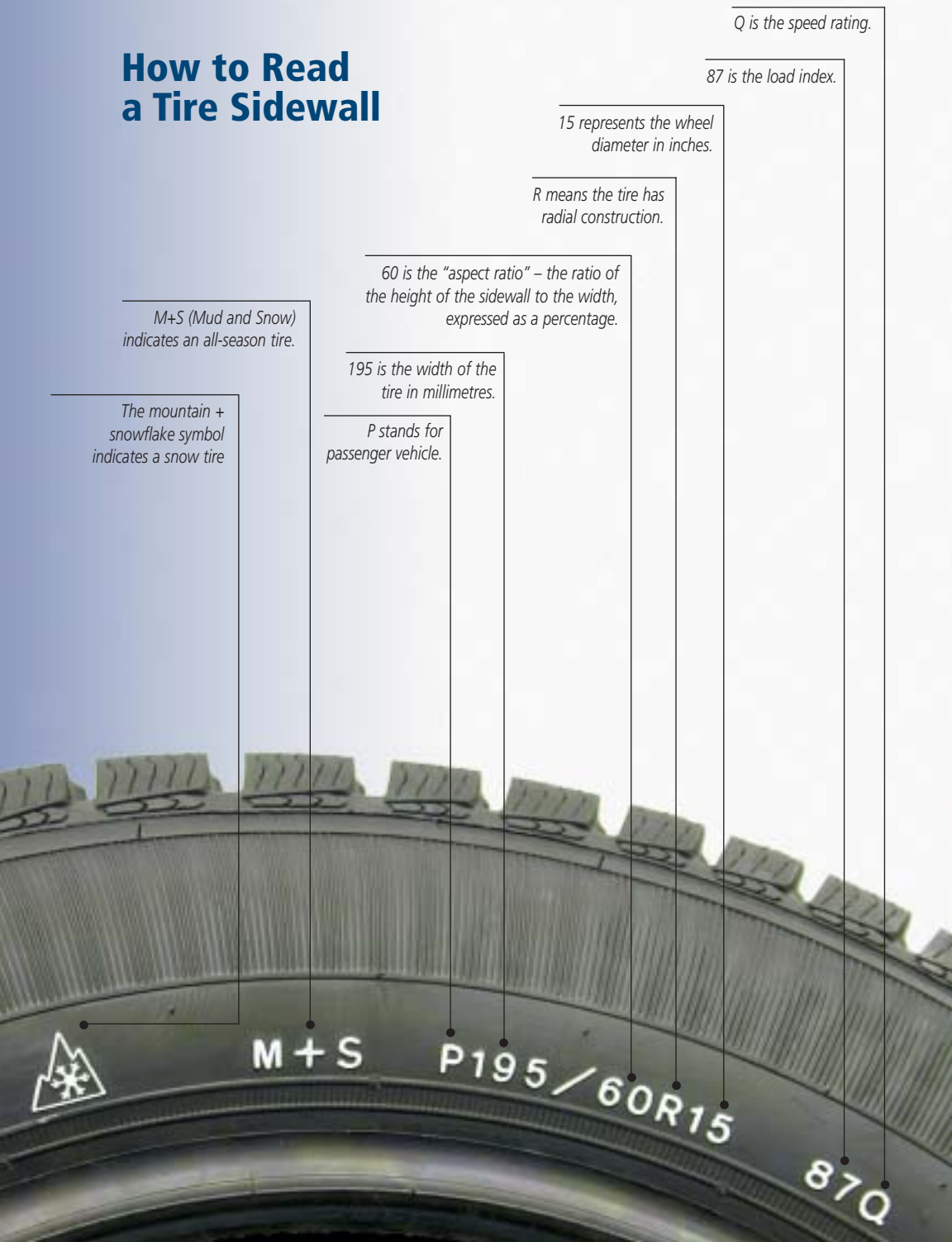
Wide, high-performance tires, other than those specifically designed as snow tires, are not suitable for use on snow-covered roads.

As a tire wears, traction is reduced. Tires that are worn close to the treadwear indicators should not be used on snow-covered roads.

Installing four snow tires will assist you in controlling your vehicle in winter conditions. Tires designed for use in snowy weather are marked with the mountain + snowflake symbol.



How to Read a Tire Sidewall



The identification number is the reference number used by the manufacturer to identify specific tires.

The maple leaf symbol is the national tire safety mark of Canada. It means the manufacturer certifies that the tire meets Transport Canada requirements.

Tire pressure monitoring systems (TPMS)

Some new vehicles are equipped with these systems, which indicate when a tire becomes underinflated.

Tire pressure monitoring systems do not replace the maintenance procedures recommended here.

Some tire pressure monitoring systems provide a warning only when a tire is significantly underinflated. The tire may be close to failure. When a monitoring system warns that pressure is low, check your tires as soon as possible.

Make sure you understand the tire pressure monitoring system installed on your vehicle. Check your owner's manual.

Tire storage

Tires should be stored upright (not flat) in a cool, dark and dry indoor location. Do not store tires near electric motors. Electric motors produce ozone, which can damage the rubber.

Tire Safety Checklist

- ✔ *Check tire pressure regularly (at least once a month), including your spare tire.*
- ✔ *Inspect tires for uneven tread wear, cuts or cracks, bulges, foreign objects, or other signs of wear or trauma.*
- ✔ *Rotate your tires on a regular basis.*
- ✔ *When inflating your tires, make sure air pump hose valves and tire valves are free of dirt and other obstructions. Make sure tire valves have caps.*
- ✔ *Always check tire pressure before going on a long trip.*
- ✔ *When installing new tires, always make sure tires of the same type, size, speed rating and load index are on all four wheels.*
- ✔ *Register your new tires with the manufacturer upon purchase.*
- ✔ *Do not overload your vehicle. Check the tire information label for the maximum recommended load for the vehicle.*
- ✔ *Respect posted speed limits.*

Tire safety and Transport Canada

All tires sold in Canada must meet the safety standards set under the Motor Vehicle Tire Safety Regulations. Transport Canada administers these regulations and tests tires to ensure they conform to safety standards. These tests confirm that tires purchased in Canada are designed and manufactured to function safely on your vehicle.

Contacting Transport Canada

If you think you have a tire problem that is safety related, please contact us at:
1-800-333-0371 or
(613) 998-8616
or by e-mail at
roadsafetywebmail@tc.gc.ca

You can also write to us at:
Road Safety and Motor Vehicle Regulation Directorate
Transport Canada
Tower C, Place de Ville
330 Sparks Street
Ottawa, Ontario
KIA 0N5

or visit our Web site at **www.tc.gc.ca/roadsafety**

Cette publication est aussi disponible en français sous le titre : *Rouler sur l'air*

ISBN: 0-662-31615-0
Catalogue: T46-18/2002E
TP 2823 E

Making Canada's Roads the Safest in the World
Road Safety Vision 2010

be tire smart play your PART

Proper tire care and safety is simple and easy. The Rubber Association of Canada recommends getting in the habit of taking five minutes every month to check your tires, including the spare.

P

Pressure

Underinflation is a tire's #1 Enemy.

It results in unnecessary tire stress, irregular wear, loss of control and accidents. A tire can lose up to half of its air pressure and not appear to be flat!

A

Alignment

Is your vehicle pulling to one side, or shaking?

A bad jolt from hitting a curb or pothole can throw your front end out of alignment and damage your tires. Have a tire dealer check the alignment periodically to ensure that your car is properly aligned.

R

Rotation

Promotes uniform tire wear.

Regularly rotating your vehicle's tires will help you achieve more uniform wear. Unless your vehicle owner's manual has a specific recommendation, the guideline for tire rotation is approximately every 8,000 kilometres.

T

Tread

Measure it — and inspect it.

Advanced and unusual wear can reduce the ability of tread to grip the road in adverse conditions. Visually check your tires for uneven wear, looking for high and low areas or unusually smooth areas. Also check for signs of damage.

This national tire safety campaign is brought to you by the tire company members of The Rubber Association of Canada (RAC). For more information, visit the RAC's web site at **www.rubberassociation.ca**

Bridgestone Firestone · Cooper Tires · Continental Tire · Goodyear · Hankook Tires · Kumho Tires · Michelin · Nokian Tyres · Pirelli · Sumitomo · Toyo · Yokohama