

be tire smart play your **PART**

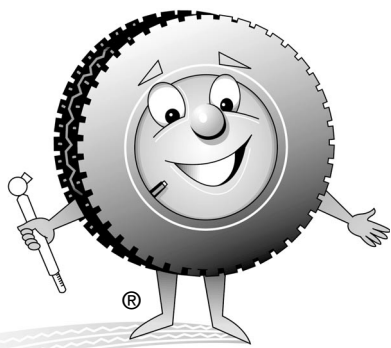
Activity **One**

How Tire Smart Are YOU?

You already know that learning to drive safely is a pretty big deal. And so is learning how to get the most out of your car by maintaining it properly. That includes the tires – because well-maintained tires make your car safer and save you money, too. But believe it or not, fewer than half of all drivers check the condition of their tires on a regular basis.

Put yourself on the road to proper tire care by taking this quiz. Just circle the answer you think is the right one. And don't worry if it turns out you're not as Tire Smart as you thought. By the end of this program, you'll have tire smarts to spare.

- 1. The best place to find the recommended tire pressure for most vehicles' tires is...**
 - a The sidewall of the tire.
 - b The vehicle owner's manual or tire information label.
 - c Information from the tire manufacturer (including its website).
- 2. According to most vehicle owners' manuals, tires should be rotated...**
 - a Every 3,000 to 5,000 miles.
 - b Every 5,000 to 8,000 miles.
 - c Every 15,000 to 17,000 miles.
- 3. You can check to see if your tires are bald by using what common item?**
 - a A penny.
 - b A tire pressure gauge.
 - c A credit card.
- 4. The best time to check the air pressure of a vehicle's tires is...**
 - a After a short drive to warm the tires up.
 - b Before driving, so that the tires are still cool.
 - c When the tires are removed from the vehicle.
- 5. You can tell if a tire is properly inflated to within a few pounds of its recommended pressure...**
 - a By looking at it.
 - b By kicking it.
 - c With a pressure gauge.
- 6. One leading cause of tire failure is...**
 - a Loose lug nuts.
 - b Under inflation.
 - c Leaving the cap off the valve.
- 7. A bad jolt from hitting a curb or pothole can...**
 - a Cause uneven treadwear.
 - b Throw the wheels out of alignment.
 - c Increase air pressure.
- 8. Uneven treadwear is always a sign that a tire...**
 - a Has internal structural damage.
 - b Should be checked by a knowledgeable tire dealer.
 - c Has been mounted backwards.
- 9. To choose the right replacement tires, you should...**
 - a Know the tire size, load, and speed rating for your vehicle.
 - b Ask for the same make and model as your old tires.
 - c Buy any tire that fits your vehicle.
- 10. Experts recommend checking the pressure and condition of your tires...**
 - a Twice a year.
 - b Every 3,000 miles.
 - c Once a month.



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Activity Two

Steer for Safety: Tire Pressure and Alignment

To be tire smart, you need to play your part, and that means learning about the four key elements of proper tire care summed up in the word “PART” – Pressure, Alignment, Rotation, and Tread. Each of these factors is important for keeping your tires in top shape, and crucial for on-the-road safety.

P.A.R.T. One – The Pressure’s On!

As you’ve learned, under inflation is a leading cause of tire failure. That’s why it’s important to maintain proper air pressure in your tires. And keeping tires properly inflated is easy to do — just follow these steps:

1. DETERMINE PROPER TIRE PRESSURE

The “right amount” of air for your tires is specified in the vehicle owner’s manual and on the tire label located on the vehicle door edge, door post, glove box door, or fuel door.

2. MAKE SURE TIRES ARE COOL

Air pressure goes up when tires heat up after driving even a mile, so check the pressure when tires are cool. If you have to drive to get air, record the pressure first, then add the appropriate pressure when you get to the pump. Never release (“bleed”) air from warm tires.

3. USE AN ACCURATE PRESSURE GAUGE

It’s impossible to determine whether tires are properly inflated just by looking at them. Always use an accurate pressure gauge, available at your tire dealer or auto supply store.

4. CHECK AIR PRESSURE

Remove the cap from the tire valve; firmly press the pressure gauge onto the valve; note the pressure indicated on the gauge; if the pressure is at the recommended level, replace the valve cap.

5. ADD AIR IF NEEDED

If the tire pressure is below the recommended level, add air until the proper level is reached. Then recheck the pressure with your pressure gauge. If you overinflate the tire, release air by pushing on the metal stem in the center of the valve. Recheck the pressure, then replace the valve cap.

6. VISUALLY INSPECT THE TIRES

Finish your pressure check by inspecting the tire, looking for nails and other embedded objects that could cause leaks. Check the sidewalls for gouges, cuts, bulges, or irregularities.

Now use this checklist to check the pressure and condition of tires on a real car – first with your class and then on your family’s vehicle at home.

P.A.R.T. Two – Watch Your Alignment... Keep Your Balance

Tires look simple, but like most parts of a vehicle, they operate in a carefully calibrated way to give you a safe ride. Two factors especially important to tire safety are wheel alignment and balance, both of which can have an effect on steering.

Wheel Alignment

Wheel alignment refers to the way tires line up with the body of a vehicle and with each other — are they straight or a little out of line? Misalignment can cause a vehicle to “pull” to one side, and causes rapid and uneven treadwear. It usually happens when tires get a bad jolt, such as hitting a pothole, but misalignment can also develop slowly over time. That’s why you should have a knowledgeable tire dealer check your alignment regularly, as specified in your vehicle owner’s manual, and have any problems fixed at once.

Balance

Balance refers to the even distribution of weight around a tire’s circumference. Even a little more weight in one place can make a tire wobble slightly as it turns, creating an annoying vibration even on a smooth road and contributing to uneven treadwear. Knowledgeable tire dealers balance a tire by attaching small weights to the wheel at just the right spots. Have your tire balance checked periodically.

Now take a look at these driving scenarios. For each one, circle your answer to indicate whether you suspect an alignment problem, a balance problem, or both.

1. On a smooth stretch of road, you hear or feel a vibration from your vehicle.

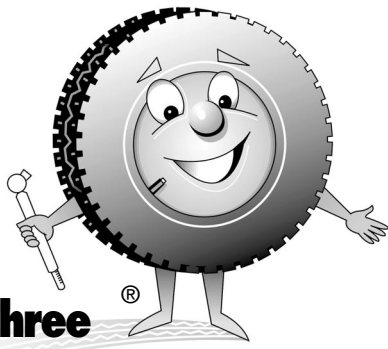
- a Alignment problem
- b Balance problem
- c Both

2. When you loosen your grip on the steering wheel, the car tends to pull to one side.

- a Alignment problem
- b Balance problem
- c Both

3. During a long drive, you notice a bouncing motion in the vehicle.

- a Alignment problem
- b Balance problem
- c Both



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Activity **Three**

Keep 'Em Rolling: Tire Rotation and Tread

The last two elements of “playing your PART” – Rotation and Tread – are important for extending tire performance and keeping your vehicle safe on the road.

P.A.R.T. One – Gotta Rotate!

As you know, tire rotation refers to shifting the position of the tires on a vehicle. Tire rotation (preferably by a tire dealer) achieves more uniform wear for all the vehicle's tires, preventing irregular wear patterns and considerably extending tire life.

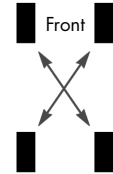
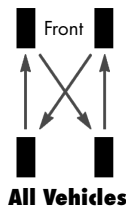
Before rotating your tires, always refer to your vehicle owner's manual for rotation recommendations and restrictions. If no rotation period is specified, rotate the tires approximately every 5,000-8,000 miles – or sooner if you spot signs of uneven wear. (In that case, have a knowledgeable tire dealer check out the cause of the wear problem, too).

Tires rotate to different positions on different types of vehicles. Some popular rotation patterns are shown here. Take this sheet home and match one of these patterns with the recommendation in your vehicle owner's manual.

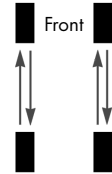
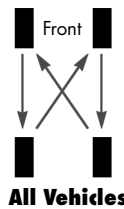
Note: When tires are rotated, the inflation pressure may need to be adjusted if your vehicle has different inflation pressures recommended for the front and rear axles.

POPULAR TIRE ROTATION PATTERNS (ONLY WHERE TIRES ARE SAME TYPE & SIZE)

Rear-and Four-Wheel Drive Vehicles

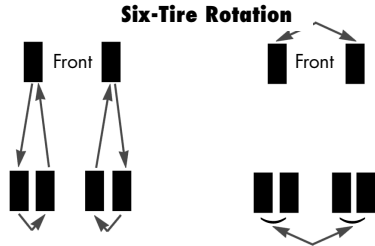
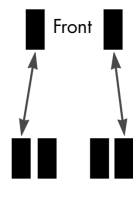
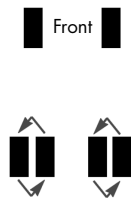


Front-Wheel Drive Vehicles



VEHICLES WITH DUAL REAR WHEELS

Rear Tire Irregular Wear Front Tire Irregular Wear



P.A.R.T. Two – Tread On!

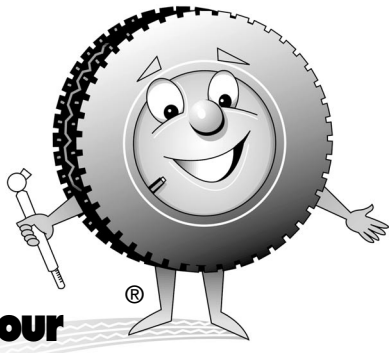
Tires are designed to provide thousands of miles of service. But sooner or later, the tread of every tire – the part that “grips” the road – will eventually wear down. And that can cause trouble. So remember: Tires with a tread worn to 2/32 of an inch must be replaced.

The “penny test” is an easy way to determine when a tire's tread has worn down to 2/32 of an inch. Just place a penny head first into a tread groove. If part of “Honest Abe's” head is covered by the tread, the tire still has treadlife. But if you can see all of Lincoln's head, the tire must be replaced!



Excessive treadwear can produce dangerous results. For each of these scenarios, explain how worn tires might have contributed to the situation.

1. Your car suddenly “fishtails” after taking a turn.
2. In a driving rainstorm, you have to struggle to maintain control of your vehicle.
3. You brake at a stop sign, but your car doesn't stop as quickly as it should.



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Activity **Four**

Play Your P.A.R.T.: It All Adds Up

Now it's time to take the sum of our PARTs and see how tire maintenance pays off in the long run.

P.A.R.T. One - Your Maintenance Profile

As you might expect, how and where you drive can have an impact on the level of maintenance your tires will require. High stress driving usually means high maintenance, since it increases tire wear. Use this chart to check your own tire maintenance profile. Then consider how you might reduce the stress on your tires by changing how and where you drive.

Your Tire Maintenance Profile	YES High Maintenance	NO Average Maintenance
Driving Habits		
● hard cornering		
● "jack-rabbit" starts		
● sudden stops		
Vehicle Use		
● heavy loads		
● pulling a trailer		
● city traffic		
Road conditions		
● potholes		
● gravel roads		
● speed bumps		

P.A.R.T. Two — Comparing Costs

Now let's see how the costs of proper tire maintenance compare to the costs of tire replacement. First, add up the annual costs provided for regular tire maintenance. Not bad, right? Now find out how much it would cost to replace all four tires on your vehicle. Look at the vehicle's tire information label or in the owner's manual to find out what type tires you will need, based on the size, load, and speed rating for your vehicle. Then contact a local tire dealer to find out what four tires of that type would cost. Put the cost into the chart and finish the addition. How does the cost of regular tire maintenance look now?

Maintenance Costs		Replacement Costs	
Pressure Check ● Pressure Gauge	\$5.00	Four New Tires** \$	\$40.00
Alignment Check ● Part of regular service*	\$0.00		
Rotation every 5,000 - 8,000 miles ● Average twice per year	\$50.00		
Tread Check ● Penny Test	\$00.01		
TOTAL		TOTAL	

All costs are based on national averages. Costs in your area may vary. *Realignment (if required) can cost \$60-100. **Contact a knowledgeable tire dealer to determine the correct tire for your vehicle, based on its recommended size, load, and speed rating, and for help answering other questions about tire maintenance and replacement.

Your P.A.R.T.

As long as we're summing up, let's review the key elements of tire care with this mini-checklist you can cut out and store in your vehicle glove compartment.

- Buy an accurate tire pressure gauge and keep it in your car.
- Check and maintain proper tire pressure every month and before every long trip.
- Check wheel alignment periodically, and correct any problems.
- Have your tires balanced periodically.
- Rotate your tires every 5,000 - 8,000 miles, or as recommended.
- Check your tread with the "penny test" - replace tires worn to 2/32 inch.
- Avoid potholes, curbs, and objects on the road.
- Don't overload your vehicle.
- Always play your PART - and buckle up for safety!