1: How does the new Tire Pressure Monitoring System (TPMS) work?

Tire pressure monitoring systems continuously monitor the pressure in the tires through sensors located in the tires (direct system) or the use of wheel speed and other vehicle sensors (indirect system). The information collected by the sensors is transmitted to an on-board processor that interprets the sensor signals and warns the driver when tire pressure is below the minimum acceptable level by illuminating a warning lamp.

2: When will the new TPMS be available?

The U.S. government, through the National Highway Traffic Safety Administration, requires that all passenger cars, light trucks and vans (Gross weight less than 10,000 pounds) be equipped with a TPMS starting in model year 2008. Due to a phase-in of the requirements, 20 percent of model year 2006 and 70 percent of model year 2007 vehicles are equipped with TPMS.

3: What does it mean if the TPMS warning lamp illuminates?

When the TPMS warning lamp on the instrument panel illuminates while driving, it means that the system has detected at least one tire with a pressure below the accepted minimum psi for the vehicle. The tires should be inspected and the tire pressure checked as soon as possible. The lamp will extinguish after the tires are properly inflated.

4: What does it mean if the warning lamp goes on and off?

On cold mornings, the warning lamp may illuminate for a short period of time and then extinguish. This type of warning lamp response is likely caused by marginally low tire pressure that dips below the warning threshold overnight but rises to an acceptable level as the tires heat up through vehicle operation or an increase in ambient temperature. The tires should be inspected and the tire pressure should be checked. The lamp should not illuminate when the tires are properly inflated.

5: What does it mean if the warning lamp flashes on and off and then remains illuminated?

All TPMS installed on 2008 model year vehicles and beyond are required to detect and warn the driver when the system is not functioning properly.
(malfunction indicator). For some TPMS, a system malfunction is indicated by a flashing of the low tire pressure warning lamp for a period 60 to 90 seconds with the warning lamp remaining illuminated after the flash sequence. The flashing sequence followed by continuous illumination of the warning lamp will repeat at each subsequent vehicle start-up until the malfunction is corrected. A vehicle dealer should be contacted for a system inspection.

6: What does the TPMS warning lamp look like?

There are two different low tire pressure warning indicators allowed by the federal standard. One icon is the cross-section of a tire with an exclamation mark inside. The other is a top view of a car with all 4 tires exposed.

7: Why is proper tire inflation important?

Proper tire inflation is essential for safe and efficient vehicle operation. Safety experts estimate that 25 percent of passenger vehicles are operated with tires that are under inflated. Vehicles with properly inflated tires experience optimum ride and handling characteristics, shorter braking distances, longer tire life, and improved fuel economy.

8: Why does tire pressure change?

Many factors affect tire pressure including ambient temperature changes and tire damage such as punctures. Tire pressure drops about 1 psi for every 10 degrees F drop in ambient temperature. Additionally, tires lose as much as 1.5 psi per month as air escapes the tire and rim naturally.
9: **Is low tire pressure easily detected by eye?**

Under inflated tires are visually difficult to detect. It is recommended that tires are inspected and checked monthly with an accurate gauge. The TPMS is not intended to be a substitute for regular tire maintenance. Drivers should consult the owner’s manual for information on replacement tires and use of the spare tire.

10: **What are the economic and environmental benefits of proper tire inflation?**

Vehicles with properly inflated tires consume less fuel, have longer tire life, and emit less carbon dioxide than vehicles with under inflated tires.

11: **What are the safety benefits of TPMS?**

It is estimated that TPMS will reduce the number of annual motor vehicle crash fatalities by about 120 and the annual number of injuries due to motor vehicle crashes by about 8,500, when all passenger vehicles are equipped with TPMS.

*Source: http://www.safercar.gov/Vehicle+Shoppers/Tires/Tires+Rating/TPMS#B*