

THE BENEFITS EXTERNAL TPMS CAN OFFER

By Big Bike Parts President and CEO John LaBonte

Tire Pressure Monitoring Systems (TPMS) have come to motorcycling and can be a great safety feature in that they provide real-time data on tire pressure and temperature. We all know properly inflated tires perform better with improved fuel efficiency, longer tire life, and increased safety.

And while TPMS don't replace the need for regularly inspecting your motorcycle's tires for wear and foreign objects, they do eliminate the need to crawl around on the ground with a gauge to find the valve stem to take your bike's vitals. After all, how many of us truly manually check our tire pressure (as recommended) for each and every ride?

TPMS brings convenience to this responsibility. In addition, it provides real-time data all throughout the ride that can help us to catch a tire going flat before it's too late.

TPMS basically come in four setups. The first two setups refer to the *monitor* being "wired" or "wireless" (since the sensor at the tire is *always* communicating without wires). Systems in automobiles are "wired", in that the monitor is hard-wired as part of the gauges. "Wireless" systems, like the TireGard™ Wireless Tire Pressure Monitor Systems (WTPMS), have a portable, fob-sized monitor instead.

This fob-sized monitor can fit in your pocket and will beep and vibrate to warn you of pressure or temperatures outside of the selected range (you have the ability to set not only the low pressure, but also the high pressure, range). On a motorcycle, the vibration of the monitor in your pocket is a great way to be aware of a warning. Plus, the monitor's display will also warn you. The TireGard™ monitors have a two-color backlight LCD screen that's normally blue but turns amber when in an alarm mode. (By the way, good monitors will allow you to select your readout format in not only PSI, but also a choice of BAR or KPA.)

The other two TPMS setups involve the *sensors* themselves. There are "internal sensors" (as are used by the OEMs on some motorcycles and automobiles) or "external sensors" (which are secured to the existing tire valve stem). If your vehicle did not come with an OEM TPMS, then a WTPMS will allow you to avoid having to hard-wire a monitor and logic box.

Whether "internal" or "external", all sensors work pretty much the same. A circuit board measures the pressure and temperature and sends the data to the monitor to be displayed.

Internal sensors are great, but they do have some drawbacks. To install, you need to remove your tire and wheel, which replaces your existing valve stem. Also, some rims have a shape or contour that may prevent an internal sensor from mounting properly. In addition, as with external sensors, internal sensors require batteries. However, in almost all cases, internal sensors' batteries are non-replaceable. And while the batteries should last 4-6 years, if

they go, new internal sensors (at a cost of up to \$100 per sensor) are needed.

External sensors are typically larger valve stem caps that do the exact same thing as the internal sensors. The big difference is that you don't need to do anything to your tire or wheels; you simply remove the valve stem cap and screw on the sensor cap. It completely replaces the old cap and is 100% guaranteed to not leak. If

properly installed, they will also not come loose or fall off. In fact, TireGard™ brand actually comes with a patented anti-theft device that allows you to secure the sensor to the valve stem to avoid theft or concern over it coming loose. (In the rare event you would lose, break, or damage a sensor, TireGard™ has special learnable sensors available.)

Weighing in at just 1/3 of an ounce, TireGard's™ external sensors do not require tire rebalancing and have watch-type batteries that should last about three years and are easily changed. When you need to add air, simply

unscrew the external sensor cap, add your air, and be sure to properly reinstall the sensor cap.

The choice of external sensors, however, does require some installation attention. While they work great with all valve stems, rubber 90-degree valve stems do not last as long as metal. And depending on the age and quality of your rubber 90-degree valve stems, you need to assure they are in good shape (we recommend the use of metal valve stems for better durability).

Also, you need to check for sufficient clearance between the sensor and all brake and caliper components, front and rear. While the TireGard™ external sensors only add 5/8" in length to the valve stem, some motorcycle models offer less clearance than others.

Finally, the sensors should be frequency tuned by the factory to the specific monitor and for each sensor to properly read the proper tire location. One should also realize that the sensor will "wake up" when you start riding and, if no pressure change, nothing will update on the monitor (unless there is a pressure change of +/- 1 PSI). In addition, while riding, the sensor will "sleep after about 20 minutes" until you get a change in air pressure.

Depending on your needs, TireGard™ from Big Bike Parts offers three different WTPMS systems with external sensors. They are version: 13-315 – 2 wheel, for motorcycles (MSRP, \$199.95); 13-316 – 3 wheel, for trikes (MSRP, \$269.95); and 13-317 – 4 wheel, for bike and trailer (MSRP, \$299.95).

In addition—for those who want the option of an internal sensor—the company will be adding a 13-325 – 2 wheel for motorcycle version with internal sensors in early 2010.

For more information, visit Big Bike Parts at www.bigbikeparts.com or call (715) 234-3336.

