

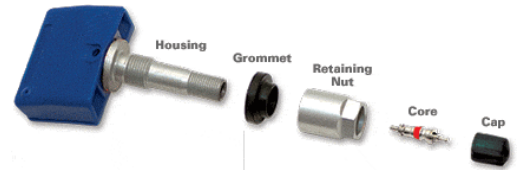
Corrosion and TPMS Sensors

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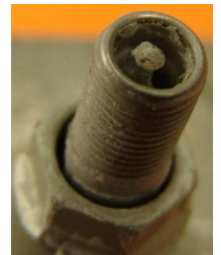
As we draw closer to the fall automotive service season, it's time to start thinking about getting our customer's cars ready for winter. While I'm excited about the upcoming football season, I shudder at the fact that the potential for snow is but a 100 or so days away.

Corrosion is an old and familiar enemy of cars and trucks, and when you live in places like Michigan, it is a year round assault on anything metallic. In the past ten years or so, corrosion has had a new target...TPMS Sensors. TPMS Sensors, in particular the clamp-in variety, are made from machined aluminum. They are fastened to the wheel with a nut, also made aluminum. The air is then held in the tire by valve core that has a protective plating on the threads. Sounds like a sound design for a TPMS sensor right?



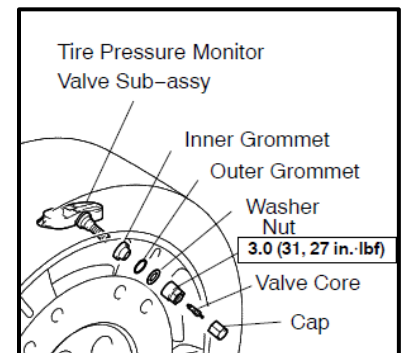
TPMS Sensors are very prone to galvanic corrosion. From Wikipedia, Galvanic Corrosion is defined as an electrochemical process in which one metal corrodes preferentially to another when both metals are in electrical contact, in the presence of an electrolyte. Without getting deep into the science of it all, suffice to say the certain TPMS sensors develop galvanic corrosion and proper maintenance is the key to extending their performance life.

Climate, environment, neglect and improper service are all factors leading to premature sensor corrosion and failure. Often times we are asked about sensor battery life, which is an understandable concern with TPMS sensors. It is however important to note that improper sensor maintenance and service will shorten the life of a sensor, way before the battery would fail.



The following are suggested best practices when servicing TPMS sensors.

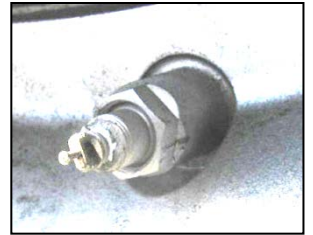
1. Always replace the wear items. At each wheel/tire service, replace the dust cap, valve core, seals and nut. This is the best thing you can do to limit corrosion and damage.
2. Always use proper replacement components when servicing TPMS sensors. To prevent galvanic corrosion, the correct nuts, seals and valve cores MUST be used.



3. Inspect for permanent damage caused by corrosion and always replace damaged components.

4. Always use proper tightening and torque procedures when assembling. Avoid over or under torque situations.

Keep in mind the most important practice is not to ignore TPMS Sensors! Always inform the customer of your inspection results. Too often we hear that when technicians see corrosion on TPMS sensors, they “leave it alone” out of fear of breaking the sensor. Corrosion weakens the material it’s affecting, leaving corroded parts in place can lead to sensor failure, or worse.



TPMS sensors are the most important component in this safety system. Proper sensor maintenance helps keep the TPMS operative, protects your customers and their investment, and is the right thing to do. Let’s not forget, it’s another service you can offer, and opportunity to create more satisfied customers.