



iNOVEX INDUSTRIES, INC.

Technical Service Bulletin – 090111

To: All Dealers, Distributors, and Customers
From: Mark Farkhan, President
Subject: Ride-On TPS Tire Sealants in Motorcycle Tires with TPMS Sensors

Ride-On TPS Motorcycle Tire Balancer and Sealant has proven TPMS friendly since the inception of its use in motorcycles. Ride-On TPS is designed to stay on the inner surface of tires keeping the product from coming into contact regularly with the TPMS sensors. Furthermore, TPMS sensors are normally sealed. In electronics, potting is a process of filling a complete electronic assembly with a solid or gelatinous compound for resistance to shock and vibration, and for exclusion of moisture and corrosive agents. Thermo-setting plastics or silicone rubber gels are often used. Even if you submersed the TPMS sensor in Ride-On (or any other liquid or containment commonly found in tires), this coating would prevent the Ride-On from harming the sensor electronics or batteries.

If your sensors are not sealed, then we do not recommend the use of Ride-On with them. Although using Ride-On with these types of sensors does not always create issues, we as the manufacturer of Ride-On do not recommend using our product in applications with TPMS systems without potted electronics. Even moisture contained in the compressed air can enter the electronics and over time create issues not related to any tire sealant. We recommend that you check with your dealer or manufacturer to determine whether your TPMS sensor has potted electronics and batteries.

It has recently come to our attention that the TPMS sensors on late model Honda Goldwings (2009, 2010, 2012) are not sealed with an epoxy coating. Just using your hands, you can snap open these sensors. This leaves the sensor's innards (battery and electronics) particularly vulnerable to any moisture/vapor or liquid. Therefore, we recommend that all of our dealers and customers refrain from installing Ride-On in late model Honda Goldwings (2009, 2010, 2012, and newer) until further testing proves our product's compatibility. Also, certain KTM 1190 and 1290 Adventures may have unsealed (non-potted) electronics and therefore should avoid the use of our sealants.

Unless you own a late model Honda Goldwing, you should have no problems using Ride-On in conjunction with your TPMS equipped vehicle(s). However, should a TPMS sensor fail, as they do from time to time, we recommend that you take your motorcycle to a Ride-On dealer for servicing. Ride-On washes out easily and leaves no residues. When requesting a warranty claim on your sensors, there is no need to volunteer that there was ever any substance in your tires.

TPMS manufactures have broad policies in regard to the injection of foreign substances inside tires containing their sensors. Simply put – these substances automatically void the sensor warranty. They are not concerned with testing individual products (sealants, balancers, liquids, powders, beads, etc.) to see whether or not these substances actually cause TPMS sensor failures. These policies are created to minimize warranty replacement costs. Let the TPMS sensor warranty administrator examine the failed sensor to determine the actual cause. **YOU DO NOT WANT TO GIVE THE WARRANTY ADMINISTRATOR A REASON TO**

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AUTOMATICALLY VOID YOUR WARRANTY! Particularly when there are many reasons why TPMS sensors fail.

According to TPMS Sensor Manufacturers, common causes of TPMS Sensor failures are:

1. Overheating – often caused by continuing to ride on a tire that is low on air or flat.
2. Installing the incorrect valve core – TPMS sensors require a special nickel-plated valve core instead of the regular copper or brass valve core.
3. Sensor Battery Issues – The batteries in TPMS sensors can become discharged over time or leak acid and cause a short.
4. Typical Road hazards – collisions, potholes, strong impacts, curbs, etc. can cause sensor damage – Sensors contain delicate electronics that are subject to failure.
5. Improper mounting or dismounting of a tire can lead to damage of a TPMS sensor.
6. Over-tightening a new sensor valve
7. Corrosion – Sensors can be damaged by corrosion from road salts, moisture, missing valve caps, or galvanic corrosion from the use of dissimilar metals.

The number one reason why TPMS sensors fail is due to aging batteries. TPMS sensor batteries typically last from 4-6 years. As batteries age, they leak acid.

Why to Batteries Leak Acid?

All batteries gradually self-discharge (whether installed in a device or not) and dead batteries will eventually leak. Extremely high temperatures can also cause batteries to rupture and leak (such as in a car during summer).

The reason for leaks is that as batteries discharge — either through usage or gradual self-discharge — the chemistry of the cells changes and some hydrogen gas is generated. This out-gassing increases pressure in the battery. Eventually, the excess pressure either ruptures the insulating seals at the end of the battery, or the outer metal canister, or both. In addition, as the battery ages, its steel outer canister may gradually corrode or rust, which can further contribute to containment failure. Once a leak has formed due to corrosion of the outer steel shell, potassium hydroxide absorbs carbon dioxide from the air to form a feathery crystalline structure of potassium carbonate that grows and spreads out from the battery over time, following along metal electrodes to circuit boards where it commences oxidation of copper tracks and other components, leading to permanent circuitry damage. The leaking crystalline growths can also emerge from seams around battery covers to form a furry coating outside the device, that corrodes any objects in contact with the leaking device.

In conclusion, we would like to point out that literally thousands of tires have installed Ride-On TPS with TPMS sensors without any issues. If in the future any more such instances arise with other motorcycles makes and models that may have compatibility issues with Ride-On, we will add that additional information to our website. Please make sure to visit www.rideon.com/tpms for more details. When the batteries of potted TPMS sensors leak acid, the pressure generated causes a bulge or even rupture of the potting material.

As always, ride safe and Ride-On.

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