Tire Dismounting Guidelines

1) Remove the valve cap and core and deflate the tire completely. Then remove any balancing weights and position them horizontally at the 6 o’clock position. Use the bead shelf to spread the outer tire bead. It may be necessary to rotate the tire 1/2 of a clock position and reapply the bead shelf to completely seal around the tire bead. Next, apply the same process to the inner tire bead.

2) Apply lubricant to the outer bead and rim, and align the valve with the left side of the mounting head.

3) Insert the tire tool and lift the outer tire bead onto the mounting head and rotate the table to dismount the outer bead from the rim.

4) Re-position the sensor / valve on an step two and insert the tire tool at the left of the mounting head, and rotate the table to dismount the inner bead. Now, remove the tire.

Important reminder: There are two things that can damage the sensor when mounting/dismounting a tire: Tools and the tire beads.

Sensor Mounting Guidelines

- Rubber grommet
- Screw
- Pressure sensor
- Break-away flange nut
- Nut
- Valve stem
- Washer
- Plastic shaper

Adjustable Angle TPM Sensor Mounting Guidelines

1) Insert the screw into the slotted hole of the sensor: Using an index finger, insert the screw into the slotted hole of the sensor housing, and check that the hole of the square part of the screw fit accurately.

2) Assemble the valve to the screw: Turn the valve stem 3 to 4 full rotations.

3) Insert the sensor unit through the valve hole of the rim: Hold the sensor feet against the flange on the valve of the rim, and insert fully until the grommet contacts the sealing surface.

4) Insert the nut over the valve stem: By hand or with an 11 mm socket wrench begin to tighten the nut 3 or 4 rotations.

5) Continue tightening the nut: Using a torque wrench, continue tightening the nut. The nut’s internal flange is designed to break away from the sensor housing.

6) Valve/screw attachment is completed: The nut’s internal flange is designed to break away at approximately 20-30 in or 2.2 Nm. The screws and the valve stem are now secured, but the sensor is not secured.

Fixed Angle TPM Sensor Mounting Guidelines

1) Insert the sensor unit through the valve hole of the rim: Hold the sensor feet and the rubber grommet against the rim surface.

2) Insert the nut over the valve stem.

3) Tighten the nut to the final torque: Using a torque wrench, continue tightening the nut.

4) Valve/screw attachment is completed: At this point, the valve/screw attachment is completed.

Tire Mounting Guidelines

1) Place the rim on the mounting table with the curb side of the rim face-up and secure the rim clamps. Next, move the rubber grommet to the position. Using an index finger, insert the screw into the slotted hole of the sensor housing, and check that the hole of the square part of the screw fit accurately.

2) Assemble the valve to the screw: Turn the valve stem 3 to 4 full rotations.

3) Insert the valve stem through the valve hole of the rim: Hold the sensor feet against the trim corner of the rim and the grommet against the sealing surface.

4) Insert the nut over the valve stem: By hand or with an 11 mm socket wrench begin to tighten the nut 3 or 4 rotations.

5) Continue tightening the nut: Using a torque wrench, continue tightening the nut.

6) Outer bead: Now, rotate the mounting head so that the sensor is once again in the 6 o’clock position. Using the tire tool, lift the outer tire bead fully up on the mounting head and while rotating the table, manually advance the tire until the outer tire bead is positioned.

7) To inflate the tire, first remove the valve cap and core. Keep these in a safe, easy to find place. Next, inflate the tire up to a maximum of 40-50 psi or 2.8 bar to seat the tire beads. Two popping sounds indicate that both tire beads have been seated. Re-install the original valve core, if clean, then adjust the tire pressure to the vehicle’s recommended placard pressure, and re-tie and tighten the valve cap. The tire is now ready to be mounted on the vehicle.

How To Identify Direct Tire Pressure Monitoring Systems

Refer to the vehicle owner’s manual or look for the following indicators.

- Does the vehicle dashboard have a symbol of the tire that lights up to positions, or a text message that states “Check tire pressure”, or something similar?

- Are the wheels staked aluminum and/or secured with nuts? This may indicate a TPM sensor.

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DECISION FLOWCHART

1) Is the sensor housing broken or physically damaged?

2) Replace both the sensor and the valve assembly.

3) For adjustable angle sensors, replace the sensor, but do not replace any assembly including the rubber grommet, tire air stem, or valve caps.

4) Replace the sensor and valve from the rim and inspect the sensor for any physical or external damage.

5) Inner bead: Using a tire tool, lift the inner tire bead up and place it partly on the mounting head. Then, while rotating the table, manually assist the tire until the lower bead is completely positioned.

6) Outer bead: Note: rotate the mounting head so that the sensor is once again in the 6 o’clock position. Using the tire tool, lift the outer tire bead partly on the mounting head and while rotating the table, manually advance the tire until the outer tire bead is positioned.

7) To inflate the tire, first remove the valve cap and core. Keep these in a safe, easy to find place. Next, inflate the tire up to a maximum of 40-50 psi or 2.8 bar to seat the tire beads. Two popping sounds indicate that both tire beads have been seated. Re-install the original valve core, if clean, then adjust the tire pressure to the vehicle’s recommended placard pressure, and re-tie and tighten the valve cap. The tire is now ready to be mounted on the vehicle.

The Decision Flowchart helps determine whether a tire pressure monitoring system needs to be replaced.
EnTire Solutions, LLC
Tire Pressure Monitoring Replacement Sensor Activation and ID Learning Guidelines

EnTire Solutions sells two types of tire pressure monitoring systems (TPMS), Low-Line and High-Line. This document addresses the replacement sensors’ activation and new learning guidelines for replacement TPMS sensors.

As required by NHTSA, vehicles equipped with a TPM system include a low tire pressure telltale and a TPMS malfunction indicator. Some vehicles may be equipped with only the low tire pressure telltale to indicate a low tire pressure as well as a system malfunction. Please refer to the vehicle owner’s manual for more information on TPMS warning lamps.

IMPORTANT: Before a sensor can start sending information to the electronic control unit (ECU), the sensor must be activated. EnTire Solutions sensors are shipped in a storage, or nonfunctional mode in order to conserve battery power. Installing the sensor in the tire and adding at least 20psi (140 kPa) of pressure will activate the sensors.

Sensor: Part Number 221849-101 (LOW – LINE) (check sensor markings)

STEP 1: Replacement Sensor Installation and Activation

1. Install the replacement sensor on the wheel. (It is recommended to use the EnTire Solutions service installation poster guidelines when installing a new TPMS sensor).
2. Ensure that all tires are inflated to the vehicle recommended placard pressure and mounted on the vehicle.
3. Within 5 minutes, the sensor will be activated and ready to be learned by the vehicle.
4. Follow the sensor ID learning guidelines for Low-Line TPMS below to complete the sensor ID learning procedure.

STEP 2: Sensor ID Learning

This procedure defines steps for learning the new sensor ID after replacement without use of tools.

NOTE: EnTire Solutions recommends use of a TPMS tool wherever applicable and if available. Follow the tool instructions or contact your tool supplier for instructions on how to learn the new sensor ID.

1. Drive the vehicle consistently at 15 mph (24kph) or greater for 20 minutes to learn the new sensor ID.
2. After 20 minutes of driving time, verify that the TPMS malfunction indicator is turned off, indicating that the new sensor ID has been learned.

NOTE: If the vehicle TPMS malfunction indicator is illuminated after learning the new sensor ID, consult the vehicle manufacturer service manual for troubleshooting instructions.

STEP 3: Optional - Validation guidelines to ensure that all sensors’ IDs are learned correctly

1. Beginning with the Front Left tire, rapidly reduce the air pressure at least 10psi below vehicle placard pressure.
2. Approximately after 30 seconds, verify that the low tire pressure telltale lamp is ON.
3. Inflate the tire in step 2 to vehicle placard pressure. After approximately 30 seconds verify that the low tire pressure telltale lamp is turned OFF.
4. Repeat the steps 1-3 for remaining tires, following a clockwise fashion.

Sensors: Part Numbers 221670-101 and 222720-101 (LOW – LINE) (check sensor markings)

IMPORTANT: A Toyota/Honda Intelligent diagnostic tool (or equivalent), and Toyota/Honda service guidelines are necessary for this procedure! Please refer to your local Toyota/Honda dealer for information on how to obtain required tools and guidelines.

STEP 1: Replacement Sensor Installation and Activation

1. Install the replacement sensor on the wheel. (It is recommended to use the EnTire Solutions service installation poster guidelines when installing a new TPMS sensor).
2. Ensure that all tires are inflated to the vehicle recommended placard pressure and mounted on the vehicle.
3. Within 5 minutes, the sensor will be activated and ready to be learned by the vehicle.
4. Follow the sensor ID learning guidelines for Low-Line TPMS below to complete the sensor ID learning procedure.

STEP 2: Sensor ID Learning

This section describes programming of the new sensor ID using a diagnostic tool.

1. Follow the TPMS service procedures found in the Toyota/Honda service guidelines for memorizing new TPMS sensor IDs with an intelligent diagnostic tool.
2. When all four sensor IDs are memorized, follow the EnTire Solutions guidelines below to verify the new sensor IDs are learned.

STEP 3: Optional - Validation guidelines to ensure that all sensors’ IDs are learned correctly

1. Beginning with the Front Left tire, rapidly reduce the air pressure at least 10psi below vehicle placard pressure.
2. Approximately after 30 seconds, verify that the low tire pressure telltale lamp is ON.
3. Inflate the tire in step 2 to vehicle placard pressure. After approximately 30 seconds verify that the low tire pressure telltale lamp is turned OFF.
4. Repeat the steps 1-3 for remaining tires, following a clockwise fashion.

For additional information on EnTire Solution TPM service guidelines and EnTire Solution TPM systems, please visit www.entire-solution.com

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