

Tire Dismounting Guidelines



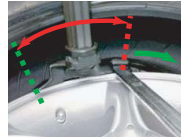
1) Remove the valve cap and core and deflate the tire completely. Then remove any balancing weights and position the sensor/valve at the 6 o'clock position. Use the bead shovel to unseat the exterior tire bead. It may be necessary to rotate the valve to the 12 o'clock position and reapply the bead shovel to completely unseat the tire bead. Next, apply the same process to the interior tire bead.



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.



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



4) Re-position the sensor / valve as in 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 Removal and Reuse Guidelines

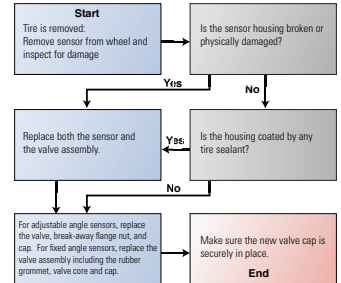


1) Unscrew the nut using an 11 or 12 mm socket wrench. Remove the nut and immediately discard the nut if it has a plastic washer attached to it. The adjustable angle sensor has a break-away feature inside the nut which is used to set the torque on the screw. This is a one time use feature. For this reason a nut with a plastic washer cannot be reused.



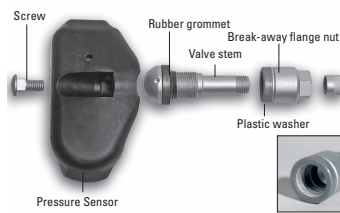
2) Remove the sensor and valve from the rim and inspect the sensor for any physical or sealant damage.

DECISION FLOWCHART

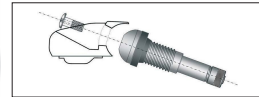


The Decision Flowchart helps determine whether a tire pressure monitoring sensor needs to be replaced.

Sensor Mounting Guidelines

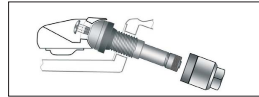


Adjustable Angle TPM Sensor Mounting Guidelines



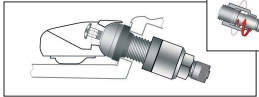
1) Insert the screw into the slotted hole of the sensor. Using an index finger, insert the screw into the slotted hole of the sensor housing, and check that the flats of the square part of the screw fit securely.

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



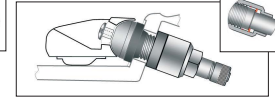
3) Slide the valve stem through the valve hole of the rim: Hold the sensor feet against the drop center of the rim and the grommet against the sealing surface.

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.

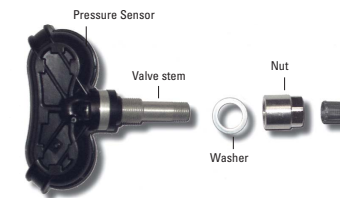


5) Continue tightening the nut: Using a torque wrench, continue tightening the nut.

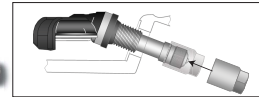
6) Valve / screw attachment is completed: The nut's internal flange is designed to break away at approximately 20 lbf.in or 2.2 Nm. The screw and the valve stem are now secured, but the sensor is not secured.



7) Tighten the nut to the final torque: Continue to tighten the nut to the final torque (35 lbf.in or 4.0 Nm). At this point, the valve/wheel attachment is completed.



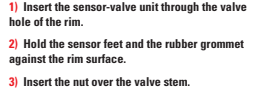
Fixed Angle TPM Sensor Mounting Guidelines



1) Insert the sensor-valve unit through the valve hole of the rim.

2) Hold the sensor feet and the rubber grommet against the rim surface.

3) Insert the nut over the valve stem.



4) Begin to tighten the nut using a 12mm deep socket. Continue to tighten the nut until 35 lbf.in or 4.0 Nm, the recommended final torque setting.

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 sensor to the 5 o'clock position. See photo in step 4 to verify sensor position.



2) Apply lubricant to the bead area of rim, but do not apply any lubricant to the sensor and its surrounding area. (See photos to the left). Then apply lubricant to the tire bead areas.



3) Place the tire on the rim, making sure that directional tires are mounted in the appropriate direction.



4) Then, place the tire mounting head securely to rim at the 12 o'clock position and slide the inner tire bead partly over the lip of the rim.

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: Now, rotate the mounting table so that the sensor is once again in the 5 o'clock position. Using the tire tool, lift the outer tire bead partly on the mounting head and while rotating the table, manually assist 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 3.5 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-install and tighten the valve cap. The tire is now ready to be mounted on the vehicle.

Note: The valve core is removed so that the air flow entering the tire is strong enough to move the beads into their seats.

How To Identify Direct Tire Pressure Monitoring Systems

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



Is this low tire pressure telltale found on the dashboard? Check for this symbol when starting the ignition.



Does the vehicle dashboard have a symbol of the vehicle that highlights tire positions, or a text message that states "check tire pressure", or something similar?



Are the valve stems aluminum and / or secured with nuts? This may indicate a TPM sensor.

Tire Pressure Monitoring Replacement Sensor Activation and ID Learning Guidelines

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 TPM system malfunction. Please refer to the vehicle owner's manual for more information on TPMS warning lamps



Low tire pressure telltale



TPMS malfunction indicator

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; therefore, they need to be activated after having been installed on the wheel. Only an activated sensor can send tire information to the ECU.

I. Enhanced Sensors: Part Numbers 218898-101, 218898-102 and 221849-102

IMPORTANT: For vehicles equipped with original equipment EnTire Solution / TRW Automotive Enhanced TPM systems only!

A. 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. Turn the ignition ON – The sensor is now activated.

B. Sensor ID Learning

1. To learn the new sensor ID, drive the vehicle consistently at 15 mph (24 kph) or greater for up to 7 minutes.
2. After 7 minutes, verify that the TPMS malfunction indicator is extinguished, indicating that the new sensor ID has been learned.

NOTE: If during the sensor learning ID process, the vehicle speed is less than 15 mph (24 kph), the learning procedure will be suspended until the speed is increased to greater than 15 mph (24 kph).

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

II. Basic Sensor: Part Number 218898-103

IMPORTANT: For vehicles equipped with original equipment EnTire Solution / TRW Automotive Basic TPM systems only!

A. 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 Hyundai/Kia or Honda specific sensor ID learning guidelines for Basic TPMS below to complete the sensor ID learning procedure.

B. Sensor ID Learning

B1. Hyundai / Kia vehicles with Basic TPM systems

B1a. Sensor ID Learning

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

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

B1b. Validation Guidelines (Optional)

1. Beginning with the Front Left tire, reduce the air pressure to at least 10 psi below the vehicle placard pressure.
2. Wait 30 seconds, and then verify that the low tire pressure telltale is ON.
3. Inflate the tire to the vehicle recommended placard pressure, and after approximately 30 seconds verify that the low tire pressure telltale is now turned OFF.
4. Repeat steps 1-3 for the remaining tires, following a clockwise fashion (Front Left, Front Right, Rear Right, and Rear Left).

B2. Honda vehicles with Basic TPM systems

IMPORTANT: A Honda Diagnostic System tool (HDS), Snap-On trigger tool, and Honda service guidelines are necessary for this procedure! Please refer to your local Honda dealer for information on how to obtain the HDS, Snap-On trigger tool, and Honda service repair guidelines for memorizing TPMS sensors.

B2a. Memorizing TPMS sensor ID(s) using Honda TPMS servicing guidelines

1. Ensure that the Honda vehicle being serviced is at least 10 feet away from other vehicles with TPMS.
2. Follow the TPMS "memorizing new TPMS sensor IDs" service procedures found in the Honda service guidelines using the HDS and Snap-On tools.
3. When all four sensor IDs are memorized, the TPMS malfunction indicator should be turned ON and blinking.
4. Proceed to the EnTire Solutions guidelines below to learn the new sensor IDs.

B2b. Sensor ID Learning using EnTire Solutions replacement guidelines

NOTE: Sensor IDs must be memorized using Honda tools and procedures before beginning the sensor ID learning.

1. Drive the vehicle consistently at a speed greater than 15 mph (24 kph) for 4-5 minutes until the TPMS malfunction indicator is not blinking and is turned OFF. All four sensor IDs should now be learned by the control unit.

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

B2c. Validation Guidelines (Optional)

1. Turn the vehicle ignition ON.
2. Use the Snap-On tool to wake up the Front Left TPMS sensor.
3. Reduce the air pressure to at least 10 psi below vehicle placard pressure.
4. Wait 30 seconds, and then verify that the low tire pressure telltale is ON.
5. Inflate the tire to the vehicle recommended placard pressure, and after approximately 30 seconds verify that the low tire pressure telltale is turned OFF.
6. Repeat steps 2-5 for the remaining tires, following a clockwise fashion (Front Left, Front Right, Rear Right, and Rear Left).

For additional EnTire Solutions TPM information, please visit www.entire-solution.com.

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