Tire Pressure Monitoring System (TPMS) Sensor Removal & Installation Instructions

Prior to the installation of this DENSO First Time Fit® TPMS Sensor, you must read these instructions completely.

Definition of Terms

⚠**WARNING:**	Describes precautions that should be observed in order to prevent injury or death to the user during installation.
⚠**CAUTION:**	Describes precautions that should be observed in order to prevent damage to the vehicle or its components, which may occur during installation if sufficient care is not taken.
NOTE:	Provides additional information that facilitates installation work.

General Service Information and Requirements

REGULATION: This device complies with part 15 of the FCC Rules and with RSS-210 of Industry Canada.

Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

FCC WARNING: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

⚠**WARNING:** Use of these products contrary to specifications and directions may result in personal injury or property damage.

Key Points

This TPMS sensor is a replacement or maintenance part for motor vehicles that have a factory installed device.

This sensor requires professional installation.

Keep these installation instructions accessible.

Each TPMS sensor is designed and manufactured to operate in a specific motor vehicle make, model, and year. Only install the device designated for your vehicle.

⚠**WARNING:** Failure to follow these installation instructions may result in air leakage or other failures which might cause an accident or damage, or may result in the failure of the motor vehicle TPMS.

If the manufacturer's recommended wheels and/or tires are not used, the vehicle owner takes full responsibility for any problems of installation and/or operation of this device.

⚠**CAUTION:** Do not install the device in damaged wheels. Never modify the device. Improper device installation may cause the motor vehicle TPMS to fail to operate properly.

Removal of the TPMS Sensor

⚠**WARNING:** Always wear safety glasses and necessary protective coverings when working with the removal and installation of TPMS sensors.

BEFORE DISASSEMBLING THE TIRE:

1. Remove the valve cap from the existing TPMS sensor.
2. Remove the valve core of the TPMS sensor releasing all the air from the tire.

TIRE DISMOUNTING:

1. Position the tire/wheel so that the valve stem is located at the 6 or 12 o'clock position at all times when breaking the bead. *(see Fig. 1)*
2. Use a tire changer shoe (bead break jig) to break the seal of the tire bead.
3. Disassemble upper tire bead per normal procedures.
4. Disassemble lower tire bead per normal procedures.

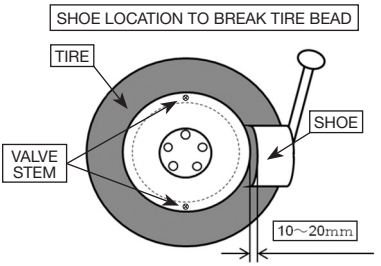

Fig. 1

5. When dismounting the tire from the rim the sensor should be slightly ahead of the tire machine head. The tire should be dismounted without contact to the sensor which may cause damage to the sensor. *(see Fig. 2)*

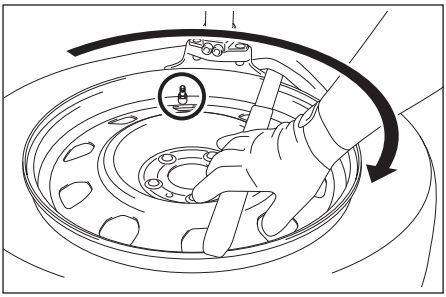

Fig. 2

REMOVAL OF THE TPMS SENSOR:

1. Remove the screw that attaches the sensor to the valve stem and remove the sensor. *(see Fig. 3)*

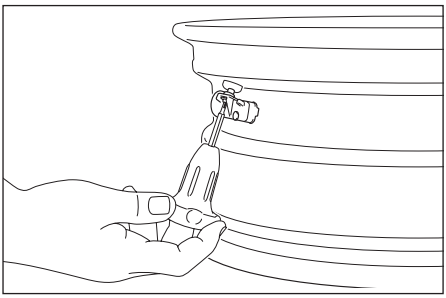

Fig. 3

2. Using a standard tire valve stem tool, pull the valve stem through the hole and discard it. Use a rubber mallet or a block of wood to avoid damage to the rim. *(see Fig. 4)*

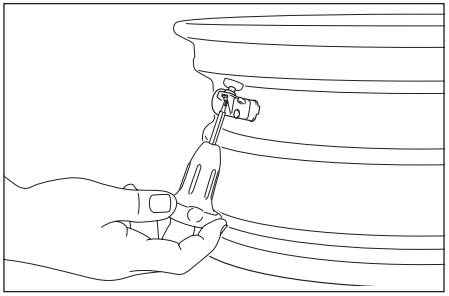

Fig. 4

Installation of TPMS Sensor

1. Insert the new sensor through the valve stem hole making sure the flat side of the sensor is toward the rim.
2. Using a standard valve stem tool pull the stem straight through the hole until the valve stem is fully seated. To avoid damage to the sensor and the rim, use a rubber mallet or block of wood placed between the rim and the tool to make sure the valve is pulled straight. *(see Fig. 4)*

TIRE MOUNTING:

1. Set the tire on tire changer after setting rim location so the TPMS sensor is setting in the location area as shown below. *(see Fig. 5)*

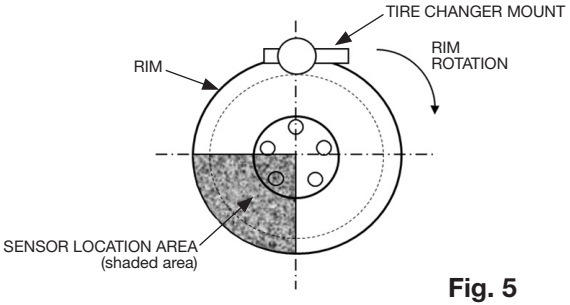

Fig. 5

2. Apply tire lubricant on both sides of the tire bead.

⚠**CAUTION:** Prevent lubricating the TPMS sensor.

3. Rotate the rim in the direction as shown and attach the lower bead of the tire to the rim.
4. Rotate the rim in the direction as shown and attach the upper bead of the tire to the rim.
5. Inflate tire to seat upper and lower beads.
6. Check tire balance and adjust if needed.

⚠**CAUTION:** If assembled with TPMS sensor outside this area, contact with the tire bead may damage the sensor.

Registration

After installation, register the new ID numbers to the vehicle through the OBD II port, set alarm air pressure and test the motor vehicle TPMS using procedures described in the original manufacturer's service guide. Adjust alarm air pressure as needed.

If the system fails to operate properly, check all the installation procedures to ensure proper installation and retest.

⚠**WARNING:** Failure to properly install and ensure that the TPMS is working properly can result in collision, severe injury, or death.

NOTE: TPMS works using a Radio Frequency (RF). During registration it is best to maintain a distance from electric noise to insure proper registration.

Component Information

Valve Cap: Ensure to attach the valve cap. Use DENSO parts. Never use a metal cap.

Valve Core: Only use DENSO Ni-plated valve cores.

Flat Tire Sealant: After use of a flat tire sealant the TPMS sensor should be replaced.

Troubleshooting

1. If the TPMS telltale (!) remains illuminated in your vehicle, perform the following diagnosis:
    A. Turn the vehicle ignition to the OFF position for at least 30 seconds.
    B. Start the vehicle and pay attention to the telltale. Is the telltale flashing or steady during the first 20 seconds of starting the vehicle?
2. Telltale not flashing (under inflation):
    A. One of your tires is under inflated. Check all tires, including the spare, to confirm the correct pressure.
    B. Keep in mind that cold temperatures can lead to low pressure in a tire.
    C. Make sure there is a good seal around the rim valve hole. Use soapy water to check for a leak around the seal area.
    D. Refer to the original manufacturer's service guide to confirm any requirement to set the threshold for warning.
3. Telltale is flashing (improper communication from sensor to receiver):
    A. Did you register the new ID numbers to the vehicle through the OBD II port?
    B. Confirm the part number is the correct part for the specific make, model, and model year vehicle.
    C. Confirm transmission from TPMS sensor using a trigger tool manufactured to interface with the specific part number for that make and model.
    D. Communicate with the Point of Sale for further information.