Common Relearn Procedures for Vehicles with Direct TPM Systems

CHRYSLER

Chrysler introduced self-learning TPM systems on their vehicles beginning in 2003 and rolled these systems into all their vehicles over the following three years. Previous to using self-learning systems, Chrysler vehicles with direct TPM systems used magnets to trigger the sensors. Some Chrysler models required the use of a Chrysler DRB-III scan tool connected to the vehicle’s Data Link Connector (DLC).

Older Chrysler vehicles that did not have self-learning TPM systems were typically placed in learn mode using the Electronic Vehicle Information Center (EVIC) by accessing “RETRAIN TIRE SENSORS” mode using the MENU button. These vehicles used magnetically triggered sensors. Chrysler did not employ indirect TPM systems.

FORD MOTOR COMPANY

When attempting to trigger sensors on Ford branded vehicles with direct TPM systems, it is important to know what type of sensor you are attempting to trigger. (see support document “Sensors on Ford Branded Vehicles”)

In 2006 Ford introduced on some of their models TPM sensors that were triggered using an electronic RF (radio frequency) signal. This style sensor is strapped or banded directly to the wheel using a metal band. These sensors are designed to be mounted 180º across the wheel from valve stem. When triggering these sensors with a TPM tool, the tip of the tool needs to be positioned on the sidewall or tread of the tire directly opposite the valve stem. Valve stems in these vehicles are standard type stems requiring no special tools or components. Ford rolled this type of sensor out to their entire product line by the 2007 model year.

Note:
New banded style tire pressure sensors for Ford vehicles are shipped in an OFF mode to preserve battery life. It must be turned ON before it can be trained. To turn the sensor on, mount the sensor on the wheel and inflate the tire to the recommend inflation pressure and wait two minutes before beginning a sensor learn procedure.

Before the banded style sensors were employed, Ford used magnetically triggered sensors in vehicles with direct TPM systems. In these vehicles the valve stem is part of the sensor assembly.
TPM SENSOR LEARN PROCEDURE

1. Turn ignition to OFF position.
2. Turn ignition from OFF position to the RUN position 3 times, ending in RUN position. Do not wait more than one minute between each key cycle.
3. Press and release the brake pedal.
4. Turn ignition switch to OFF position.
5. Turn ignition from OFF position to the RUN position 3 times, ending in RUN position. Do not wait more than one minute between each key cycle.
6. The horn will sound once and the TPMS indicator will flash if train mode has been entered successfully (if equipped, the message center displays “TRAIN LF TIRE”).
7. Perform one of the following steps depending on what style of sensor the vehicle uses:

   a. If the vehicle uses magnetically triggered sensors, place magnet on the end of on the valve stem of the left front tire pressure sensor. The horn will sound briefly to indicate that the tire pressure sensor has been recognized by the TPMS module.

      Within 2 minutes after the horn sounds, place the magnet on the valve stem of the right front tire pressure sensor. Repeat procedure for right rear and left rear tires.

   b. If the vehicle uses electronically triggered banded sensors (all banded style sensors are electronically triggered), place the tip of the TPM tool on the tread side of the tire directly opposite the valve stem and activate. If the tread side of the tire is not accessible place the tip of the TPM tool on the sidewall directly opposite the valve stem and activate. The horn will sound briefly to indicate that the tire pressure sensor has been recognized by the TPMS module.

      Within 2 minutes after the horn sounds, position the tool on the tire of the right front tire pressure sensor and activate. Repeat procedure for right rear and left rear tires.

8. When the tire training procedure is complete, the horn will sound once and the message center (if equipped) will display “TIRE TRAINING MODE COMPLETE”.

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   b.

   c.

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   z.
GENERAL MOTORS

GM vehicles typically use of the two following procedures to place a vehicle in learn mode.

METHOD 1

1. Put key in ignition and turn to ON position with engine OFF and then apply the parking brake.
2. Turn the exterior lamp switch from OFF to parking lamps four times within 4 seconds. A horn chirp sounds and the low tire pressure indicator flashes to indicate the learn mode is enabled.
3. At the left front tire, do one of the following:
   a. Hold the round end of the TPM Activation tool against the tire sidewall at the valve stem location and then press and release the Activate button and wait for the horn chip, or
   b. Increase or decrease the tire pressure 5 to 10 psi and then wait for the horn chirp

NOTE: If the horn does not chirp after 35 seconds, turn the ignition OFF and restart the procedure.

4. Repeat step 3 for the remaining sensors in the order: right front, right rear, left rear.
5. Turn the ignition OFF to exit the learn mode.
6. Adjust the tires to recommend pressures.

METHOD 2

1. If using a standard ignition switch, place the switch in the RUN position with the engine OFF. If using an electronic keyless ignition switch, place the switch in the ACCY position.
2. To initiate the sensor learn mode, do one of the following:
   a. Press and hold the DIC Vehicle Information button until the RELEARN TIRE POSITONS message displays. Press the Set/Reset button. The horn chirps twice and the TIRE LEARNING ACTIVE message displays, or
   b. If there are no DIC buttons on the vehicle, press the trip odometer reset stem until the RELEARN TIRE POSITIONS message displays. Press and hold the reset stem until the horn chirp twice and the TIRE LEARNING ACTIVE message displays, or
   c. Simultaneously press the lock and unlock buttons on the keyless entry transmitter. A horn chirp will sound indicate that the sensor learn mode has been enabled.
NOTE: Learn mode automatically disables after 5 minutes or after 2 minutes of inactivity). If disabled before learning any sensors, all previous sensor IDs and locations remain stored in the PDM.

3. At the left front tire, do one of the following:
   a. Hold the round end of the TPM Activation tool against the tire sidewall at the valve stem location and then press and release the Activate button and wait for the horn chip, or
   b. Increase or decrease the tire pressure 5 to 10 psi and then wait for the horn chirp.

NOTE: If the horn does not chirp after 35 seconds, turn the ignition OFF and restart the procedure.

4. Repeat step 3 for the remaining sensors in the order: right front, right rear, left rear.
5. Turn the ignition OFF to exit the learn mode.
6. Adjust the tires to recommend pressures.

**ASIAN BRANDED VEHICLES**

Most Asian branded models require special OEM tools to relearn their vehicles. As part of the relearn procedure the sensor ID number must be registered to the TPM control module on the vehicle. Following is a list of the tools required by each Asian OEM.

- **Honda / Acura**  Honda Diagnostic System (HDS) or ODB-II
- **Hyundai**  TPMS Exciter Scan Tool
- **Nissan / Infiniti**  CONSULT-II and CONSULT-II CONVERTER
- **Kia**  TPMS Exciter Scan Tool
- **Mitsubishi**  Scan Tool (MUT-III Sub Assembly)
- **Subaru**  Subaru Select Monitor
- **Suzuki**  SUZUKI Scan Tool
- **Toyota / Lexus**  Toyota Intelligent Tester
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