

TIRE PRESSURE MONITOR SYSTEMS

GM - Buick - Encore & Chevy Trax - 2013-18

DESCRIPTION & OPERATION

NOTE: When the wheels have been rotated, or a tire pressure sensor has been replaced, retrain tire pressure sensor. See [RESET PROCEDURES](#).

TIRE PRESSURE MONITOR (TPM) SYSTEM

The Tire Pressure Monitor System (TPMS) uses radio and sensor technology to check tire pressure levels. The TPMS tire pressure sensors monitor the air pressure in each tire and wheel assembly, excluding the spare tire.

TIRE PRESSURE MONITOR WARNING INDICATORS

When the tire pressure warning light illuminates and warning message appears on DIC, immediately check air pressure of all tires and adjust to the specified pressure. Both the TPMS indicator icon and DIC message can be cleared by driving the vehicle above 25 mph (40 km/h) for at least 2 minutes.

The TPMS indicator icon on the IPC will flash for 1 minute and then remain illuminated and the DIC will display the "SERVICE TIRE MONITOR SYSTEM" message if one or more of the tire pressure sensors or other system components has malfunctioned or if all of the sensors have not been programmed successfully. If warning indicators are still on, there is a problem in the TPM system. See appropriate manufacturer service information.

TPMS RESET PROCEDURES

NOTE: When the wheels have been rotated, or a tire pressure sensor has been replaced, retrain tire pressure sensor.

When the tire pressure warning light illuminates and warning message appears on DIC, immediately check air pressure of all tires and adjust to the specified pressure. Both the TPMS indicator icon and DIC message can be cleared by driving the vehicle above 25 mph (40 km/h) for at least 2 minutes.

TIRE PRESSURE SENSOR RELEARN

NOTE: When the wheels have been rotated, or a tire pressure sensor has been replaced, retrain tire pressure sensor.

NOTE: A TPM Sensor Activation Tool (EL-50448, or equivalent) is required for this procedure.

NOTE: Once the TPM learn mode has been enabled, each of the sensor unique identification (ID) codes can be learned into the BCM memory. When a sensor ID has been learned, the BCM sounds a horn chirp. This verifies the sensor has transmitted its ID and the BCM has received and learned it. The BCM must learn the sensor IDs in the proper order to determine correct sensor location. The first learned ID is assigned to the left front, the second to right front, the third to right rear and the fourth to left rear.

NOTE: Learn Mode Cancellation: The learn mode will cancel if the ignition is cycled to OFF or if more than 2 minutes has elapsed for any sensor that has not been learned. If the learn mode is cancelled before the first sensor is learned, the original sensor IDs will be maintained. If the learn mode is canceled for any reason after the first sensor is learned, all IDs

are erased from the BCM memory and if equipped, the DIC will display dashes for tire pressures.

WARNING:

If not utilizing a scan tool to initiate the relearn procedure, stray signals from other TPM equipped vehicles just driving by can be inadvertently learned. If any random horn chirps are heard from the vehicle while performing the learn procedure, most likely a stray sensor has been learned and the procedure will need to be cancelled and repeated. Under these circumstances, performing the TPM Learn Procedure away from other vehicles would be highly recommended. In the event a particular sensor activation does not cause the horn to chirp, it may be necessary to rotate the wheel valve stem to a different position due to the sensor signal is being blocked by another component. Before proceeding with the steps below, verify the following: No other sensor learn procedure is being performed simultaneously within close proximity. Tire pressures are not being adjusted on another TPM equipped vehicle within close proximity. Park Brake Switch input parameters are functioning correctly.

1. Apply the parking brake (Manual Transmission only).
2. Turn ON the ignition, with the engine OFF.
3. Using a scan tool or the DIC, select Tire Pressure Sensor Relearn. The horn sounds twice to signal the receiver is in relearn mode and the TIRE LEARN or TIRE LEARNING ACTIVE message displays on the DIC screen. To activate the sensor learn procedure using the DIC, see below:

NOTE: **Driver Information Center (DIC): Press MENU on the turn signal lever until Vehicle Information Menu is displayed (see [Fig. 1](#))**

- a. Use the MENU button to select the Vehicle Information Menu (Menu 2).
- b. Use the thumbwheel (or up and down arrows) to scroll to the Tire Pressure Menu Item screen.
- c. Press and hold the SET/CLR button to begin the sensor matching process. A message requesting acceptance of the process may display. If requested, press the SET/CLR button again to confirm the selection.

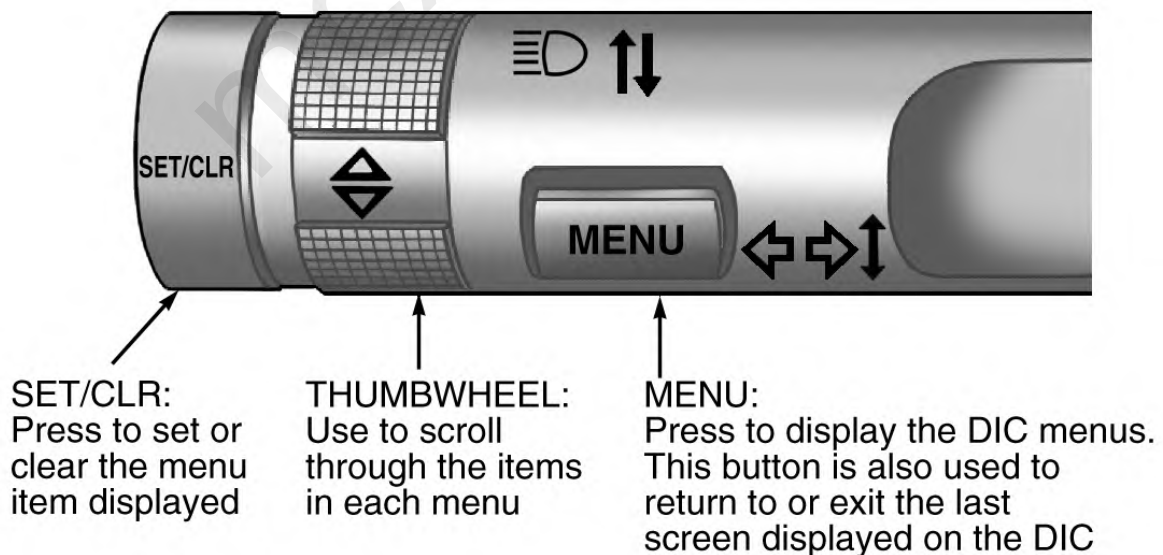


Fig. 1: Identifying Driver Information Center (DIC) Buttons

Courtesy of GENERAL MOTORS CORP.

4. Starting with the left front tire, learn the tire pressure using one of the following methods:
 - **Method 1:** Hold the antenna of the Sensor Activation Tool against the tire sidewall close to the wheel rim at the valve stem location then press and release the activate button and wait for a horn chirp.

- **Method 2:** Increase/decrease the tire pressure for 8-10 seconds then wait for a horn chirp. The horn chirp may occur before or up to 30 seconds after the 8-10 second pressure increase/decrease time period has been reached.
5. After the horn chirp has sounded, repeat procedure for the remaining 3 sensors in the following order: Right front, Right rear, Left rear.
 6. After the LR sensor has been learned, a double horn chirp will sound indicating all sensors have been learned. The TIRE LEARN or TIRE LEARNING ACTIVE message on the DIC display screen goes off.
 7. Turn OFF the ignition to exit the learn mode.
 8. After the learn mode has been exited, adjust all tires to the recommended pressures.

DISMOUNTING/MOUNTING PROCEDURES

CAUTION: The tire should be dismounted from the wheel using the tire changer manufacturer's instructions. Use the following information to avoid damage during the dismounting/mounting procedures.

NOTE: If vehicle's tires are replaced with those not having a TPC Spec number, the TPM system may give an inaccurate low pressure warning. Non-TPC Spec tires may give a low pressure warning that is higher or lower than the proper warning level achieved by TPC Spec numbered tires.

NOTE: When the wheels have been rotated, or a tire pressure sensor has been replaced, retrain tire pressure sensor. See [RESET PROCEDURES](#).

TIRE PRESSURE SENSOR

CAUTION: DO NOT inject any tire liquid or aerosol tire sealant into tires, as this may cause a malfunction of the tire pressure sensors. If any tire sealant is noted upon tire dismounting, replace the sensor. Also remove all residual liquid sealant from the inside of the tire and wheel surfaces.

Removal

1. Raise vehicle on a suitable support. Remove tire/wheel assembly from vehicle.
2. Dismount tire from wheel following tire changer manufacturer's instructions.
3. Remove the TORX screw (1) from the tire pressure sensor (2) and pull it straight off the tire pressure valve stem (3). See [Fig. 2](#).
4. Remove the tire pressure valve stem by pulling it through the rim.

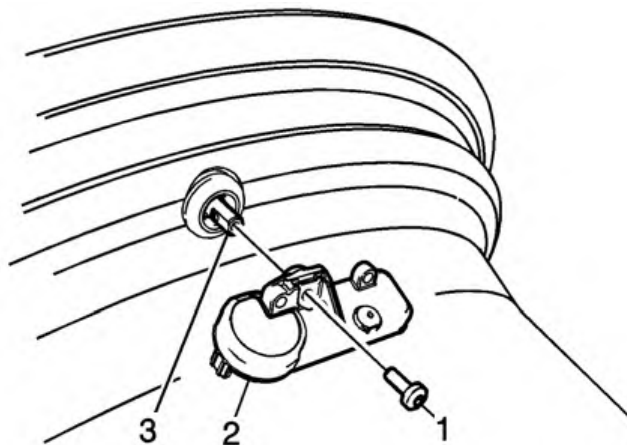


Fig. 2: Exploded View Of Tire Pressure Sensor Assembly.
Courtesy of GENERAL MOTORS CORP.

Installation

NOTE: When servicing the tire pressure sensor always use a new tire pressure

monitor (TPM) and a new TORX screw during installation.

1. Assemble the tire pressure sensor (2) to the valve stem and install the NEW TORX screw (3). Tire Pressure Monitor (TPM) valves and TORX screws are one-time use only.
2. Apply tire soap to the rubber portion of the valve stem (1).
3. Using a tire valve stem mounting tool, pull the valve stem through in a direction parallel to the valve hole on the rim.
4. Mount the tire to the rim.
5. Install tire on wheel. Install tire/wheel assembly on vehicle. Retrain tire pressure sensor. See [**RESET PROCEDURES**](#).

TORQUE SPECIFICATIONS

SPECIFICATIONS TABLE

Component	Ft. Lbs. (N.m)
Wheel Nut	103 (140)
	INCH Lbs. (N.m)
Tire Pressure Sensor TORX Screw	11.5 (1.3)