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2008 CHEVROLET Nubira/Lacetti Wagon OEM Service and Repair Workshop Manual

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B2LF B2LF Tire Pressure Sensor - Left Front

B2LR B2LR Tire Pressure Sensor - Left Rear

B2RF B2RF Tire Pressure Sensor - Right Front

B2RR B2RR Tire Pressure Sensor - Right Rear

K65 K65 Tire Pressure Indicator Module

Special Tools

- **EL-46079/J-46079** ***Tire Pressure Monitor Diagnostic Tool***
- **EL-50448** ***Tire Pressure Monitor Sensor Activation Tool***

For equivalent regional tools, refer to Special Tools.

Tire Pressure Monitoring System Operation

The tire pressure monitor system warns the driver when a significant loss or gain of tire pressure occurs in any of the 4 tires. It allows the driver to display the individual tire pressures and their locations on the driver information center.

The system uses the body control module (BCM), driver information center, instrument cluster, remote control door lock receiver, tire pressure indicator module and a radio frequency transmitting pressure sensor in each tire assembly. Each sensor has an internal power supply.

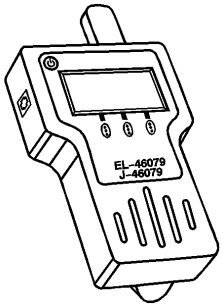
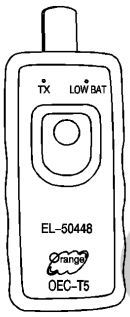
The sensors transmit whether they are located on the left side or the right side on the car based on rotation direction (clockwise or counter-clockwise). The tire pressure indicator module can detect whether a sensor in located on the front axle or the rear axle, depending on the sensor signal strength. This combination allows the system to assign IDs to the corner locations on the vehicle. The tire pressure indicator module transmits these assignments to the BCM over the LIN bus. If a new sensor has been installed or tire rotated, then the system will automatically detect and assign it to the proper corner. For this to happen, the vehicle will need to be driven at speed greater than 40 km/h for about 9 min.

When the vehicle is stationary, the sensors internal shock sensor is inactive which puts the sensors into a Stationary state. In this state the sensors sample tire pressure once every 30 sec and do not transmit at all if the tire pressure does not change. As vehicle speed increases, the shock sensor pulses every wheel rotation,

YOUR CURRENT VEHICLE

Special Tools

Special Tools

Illustration	Tool Number/Description
	EL 46079 Tire Pressure Monitor Diagnostic Tool
	EL 50448 Tire Pressure Monitor Sensor Activation Tool

be maintained. If the learn mode is cancelled after any sensor is learned, the DIC will display dashes instead of tire pressures for the remaining unlearned sensors and the learn procedure will need to be repeated for the system to function properly.

TPM Learn Procedure

NOTE

Important

Before proceeding, ensure that no other learn procedure is being performed simultaneously or that tire pressures are not being adjusted on another TPM equipped vehicle within close proximity. 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 so that the valve stem is in a different position due to the sensor signal is being blocked by another component. Make sure the TPM tool battery is sufficient to complete the TPM learn process. Do not place the TPM tool directly on the valve stem. The TPM tool should be placed against the tire sidewall near the valve stem. The TPM sensor learn activation procedure may have to be repeated up to 3 times before determining a sensor is malfunctioning.

1. Place the electronic keyless ignition in the ACCY position.
2. Using a scan tool, initiate the TPM Learn Mode. A horn chirp will sound indicating the Learn Mode has been enabled.
3. Starting with the left front tire, hold the antenna of the TPM special tool aimed upward against the tire sidewall close to the wheel rim at the valve stem location. Press and release the activate button. Ensure that the transmit indicator on the special tool indicates that the sensor activation signal is being transmitted. Wait for a horn chirp. If the horn does not chirp, repeat the sensor activation sequence with the tool.
4. After the horn chirp has sounded, repeat step 3 for the remaining 3 sensors in the following order:
    - Right front
    - Right rear
    - Left rear

Low Tire Pressure Indicator Malfunction

Low Tire Pressure Indicator Malfunction (UJM)

Diagnostic Instructions

- Perform the Diagnostic System Check - Vehicle prior to using this diagnostic procedure.
- Review Strategy Based Diagnosis for an overview of the diagnostic approach.
- Diagnostic Procedure Instructions provides an overview of each diagnostic category.

Circuit/System Description

The tire pressure monitor system has a radio frequency transmitting pressure sensor in each wheel/tire assembly. As vehicle speed increases, centrifugal force puts the sensor into Drive mode. The sensors send the tire pressure data to the remote control door lock receiver (RCDLR), using radio frequency (RF) transmissions. The RCDLR then decodes the RF data and passes it to the body control module (BCM). In turn, the BCM translates the data contained in the tire pressure sensor radio frequency transmissions into sensor presence, sensor mode, and tire pressure. Once vehicle speed is greater than 40 km/h (25 MPH), the BCM waits for the sensors to go into Drive mode.

Each sensor has its own unique identification (ID) code, which it transmits as part of each RF message, that must be learned into the BCM memory. Once all 4 IDs have been learned and vehicle speed is greater than 40 km/h (25 mph), the BCM continuously compares IDs and pressure data in the received transmissions to the learned IDs and vehicle placard pressures to determine if all 4 sensors are present and if one or more tires are low. If the BCM detects a low tire pressure condition or a malfunction in the system, it will send a serial data message to the instrument cluster requesting the appropriate tire pressure monitor indicator illumination and also to display the appropriate data message on the driver information center, if equipped.

Diagnostic Aids

- If unsure about the condition, cycle the ignition and observe the tire pressure monitor indicator ic
  the tire pressure monitor indicator icon is continuously illuminated after the instrument cluster bu