

Taking the Pressure Off TPM Problems

Tire pressure monitor (TPM) problems are increasingly popular. If you have problems programming, it is important to follow the instructions carefully and note that the vehicle responds to your actions. If any of your actions do not get a response from the vehicle, start the diagnostics there.

This article focuses on GM's full size utility trucks, 2004 to 2006 (Avalanche, Escalade, Suburban, Tahoe, and Yukon) that use the passenger door module (PDM) as the receiver for the tire pressure sensors and keyless entry system.

Procedure:

1. For TPM learn, the parking brake is applied and the parking lights are cycled on and off four times to enter programming mode.
2. If the red brake warning lamp does not turn on, check for good switch contact at the parking brake pedal and install a scan tool to verify the parking brake pedal apply input to the body control module (BCM).
3. If the parking lights do not turn on and off accordingly, check all other exterior lamp operation and verify no add-on accessories (auto start system, anti-theft system, etc.) have been added that may affect the exterior lamp operation.
4. These action inputs require a reaction from the vehicle. Once the criteria is met, the system will enter learn mode.
5. To verify the system has entered a learn mode, the low tire pressure indicator will be flashing or a scan tool can verify the learn mode is enabled.
6. To 'learn' the sensors, a special tool can be used, but is not necessary. For the tire pressure sensor to send a response, simply add or subtract air for approximately 10 seconds and wait. An audible feedback chirp from the horn will confirm the sensor's output was recognized. If a new sensor was installed, drive the vehicle prior to learning that sensor. Learn the sensors starting with left front, then right front, right rear, and finally left rear.
7. If it appears the vehicle is not progressing through the relearn (no horn chirp from the left front sensor), move to another sensor. Check for a response from 3 of the 4 tires, in any order, in an attempt to possibly isolate a problem. If the module recognizes the sensors in random order, replace the sensor that had no response, test drive, and relearn in the appropriate order.

If the sensors have all been learned and the tire pressure problem still exists, use the scan tool to check which tire pressures have been entered into the control module. For example: If the vehicle came with a heavy load range tire that requires high air pressure, and the vehicle is no longer equipped with the high load range tire, the air pressure of the tires may not match the programmed air pressure in the module. The tires may need to be inflated to accommodate the higher programmed tire pressure or the tire pressure entry will need to be changed in the module using the scan tool.

-Written by Mark Owens, Identifix GM Team Leader
Certified: ASE Master, L1