

2009 Chrysler Town & Country LX

2009 ACCESSORIES AND EQUIPMENT Wireless Ignition Module (WIN) - Electrical Diagnostics - Grand Caravan, Town & Country

mph).

5. With the scan tool, select View DTCs in the Tire Pressure Monitoring (TPM) Module.

Does the DTC reset or is the status Active for this DTC?

Yes

- Return to the beginning of this test and perform the diagnostic procedure as necessary.

No

- Test complete.

C1502-TIRE PRESSURE SENSOR 2 INTERNAL

For complete wiring diagrams refer to:

- **SYSTEM WIRING DIAGRAMS** for Town & Country.
- **SYSTEM WIRING DIAGRAMS** for Grand Caravan.

Theory of Operation

The tire pressure sensor actively monitors the air pressure and air temperature inside the tire, the sensor internal battery status, and the radial acceleration of the wheel. Each sensor has a unique ID code. The sensor transmits the data at regular intervals via an encoded signal to a receiver circuit located in the Wireless Ignition Node (WIN).

- **When Monitored:**

With vehicle speed greater than 24 km/h (15 mph).

- **Set Condition:**

The Wireless Ignition Node (WIN) will monitor the signals from the four active road tire sensors. A loss of signal error is detected when eight consecutive blocks of data are not received or cannot be accurately decoded. An internal sensor hardware error condition will be set when an error in the accelerometer, pressure sensor, or temperature sensor is detected.

Possible Causes
INTERMITTENT TIRE PRESSURE SENSOR INTERNAL DTC
INCORRECT SENSORS
TIRE PRESSURE MONITORING (TPM) SENSOR
WIRELESS IGNITION NODE (WIN)

Diagnostic Test

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1. DTC STATUS IS ACTIVE

NOTE: Seasonal temperature changes will affect tire pressure, and may have caused the tire pressure to fall below the low pressure warning threshold. Tire pressure should always be set based on cold inflation tire pressure (placard). This is defined as the tire pressure after a vehicle has not been driven for more than three hours, and in outside ambient temperatures.

1. Correct all tire pressures to the recommended cold inflation tire pressure specifications and wait two minutes for the system to update.
2. Ignition on engine not running.
3. With the scan tool, record and erase DTCs.
4. Test drive the vehicle at a speed greater than 24 km/h (15 mph) for a minimum of 10 minutes in order to receive TPM Sensor data and allow for the system to update.
5. With the scan tool, read DTCs.

Is the DTC status Active at this time?

Yes

- Go to Step 2.

No

- Go to Step 8.

2. TIRE PRESSURE MONITORING (TPM) SENSOR INTERNAL FAULT ACTIVE

1. Turn the ignition on.
2. With the scan tool, select Data Display for the WIN and locate the following:
 - Tire 2 Pressure Sensor HW Fault
 - Tire 2 Pressure Sensor Missing ID
 - Tire 2 Temperature Sensor HW Fault
 - Tire 2 Temperature Sensor SW O/U
 - Tire 2 Acceleration Sensor HW Fault
 - Tire 2 Loss of Signal from Pressure Sensor

Do any of the above faults read "Set"?

Yes

- Go to Step 3.

No

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- Go to Step 7.

3. TPM-RKE ANALYZER 9936

Is there a TPM-RKE Analyzer 9936 available?

Yes

- Go to Step 4.

No

- Go to Step 7.

4. TIRE PRESSURE MONITORING (TPM) SENSOR INTERNAL DTC

NOTE: This fault can be set if the incorrect or no TPM Sensor is installed on the vehicle. If the spare tire is currently installed on the vehicle, and it is not equipped with a TPM Sensor, this DTC can be set. Replace the spare with a TPM Sensor equipped wheel and tire assembly. Test drive the vehicle. If the DTC resets, continue with the diagnostic procedure.

1. Perform a visual inspection to verify that all road wheels are equipped with a TPM Sensor.
2. With the TPM-RKE Analyzer 9936 verify the correct TPM Sensor is on the vehicle.

Is the correct TPM Sensor installed on the vehicle?

Yes

- Go to Step 5.

No

- Install the correct Tire Pressure Monitoring (TPM) Sensor in accordance with the Service Information.
- Perform the TPM VERIFICATION TEST. See **TIRE PRESSURE MONITOR (TPM) VERIFICATION**.

5. TIRE PRESSURE MONITORING (TPM) SENSOR INTERNAL FAULT SET USING TPM-RKE ANALYZER

NOTE: The following procedure is used to locate the TPM Sensor that is setting the internal fault. If the tires have been rotated, the TPM Sensor is no longer in sequence from the factory. Faults are linked to the TPM Sensor IDs. You **MUST** locate the TPM Sensor that set the fault before continuing. Use the following method below at every tire location.

1. Use a TPM-RKE Analyzer 9936 to scan each TPM Sensor for a response, and store in the proper

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location in the TPM-RKE Analyzer 9936. If you receive no response from any of the TPM Sensors, check to make sure that the TPM-RKE Analyzer is set correctly and repeat the process on each non-responsive wheel.

2. Replace the TPM Sensor if the results show a "Damaged Accel", "Damaged Temp", "Damaged Press", "H/W fail", "S/W fail" or the TPM Sensor does not respond after repeated attempts. Install the correct Tire Pressure Monitoring (TPM) Sensor in accordance with the Service Information. Perform the TPM VERIFICATION TEST. See **TIRE PRESSURE MONITOR (TPM) VERIFICATION**.
3. With the scan tool, select Data Display for the WIN.
4. Check to see if the Sensor IDs match what is programmed into the WIN.

Has the TPM Sensor been located?

Yes

- Replace the Tire Pressure Monitoring (TPM) Sensor in accordance with the Service Information.
- Perform the TPM VERIFICATION TEST. See **TIRE PRESSURE MONITOR (TPM) VERIFICATION**.

No

- Go to Step 6.

6. TIRE PRESSURE MONITORING (TPM) SENSOR INTERNAL FAULT - MISMATCHED ID

NOTE: If the TPM Sensor IDs do not match, it may be necessary to move the vehicle to a location away from other TPM Sensors and repeat this step.

1. Use a TPM-RKE Analyzer 9936 to verify the TPM Sensor IDs match what is programmed into the WIN. The TPM Sensor Identifications are located under "Data Display" for the WIN.

Do the TPM Sensor IDs match what is stored in the WIN?

Yes

- Replace the Wireless Ignition Node (WIN) in accordance with the Service Information.
- Perform the TPM VERIFICATION TEST. See **TIRE PRESSURE MONITOR (TPM) VERIFICATION**.

No

- Test complete.
- Perform the TPM VERIFICATION TEST. See **TIRE PRESSURE MONITOR (TPM) VERIFICATION**.

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7. TIRE PRESSURE MONITORING (TPM) SENSOR INTERNAL FAULT SET

NOTE: Some vehicles will not receive the TPM Sensor data when the vehicle is stationary. The vehicle may need to be driven at speeds greater than 24 km/h (15 mph) for about a minute in order to receive TPM Sensor data.

1. Starting with the left front wheel, deflate the tire to 20 PSI, wait two minutes, and check the scan tool for changes to any compensated tire pressure values.
2. Look for a tire location with a non-responsive TPM Sensor ID.
3. Repeat this test on each wheel on the vehicle until the TPM Sensor in question has been identified.

Has the TPM Sensor been located?

Yes

- Install the Tire Pressure Monitoring (TPM) Sensor in accordance with the Service Information.
- Perform the TPM VERIFICATION TEST. See **TIRE PRESSURE MONITOR (TPM) VERIFICATION**.

No

- Test complete.
- Perform the TPM VERIFICATION TEST. See **TIRE PRESSURE MONITOR (TPM) VERIFICATION**.

8. INTERMITTENT TIRE PRESSURE MONITORING (TPM) SENSOR DTC

1. The conditions necessary to set this DTC are not present at this time.
2. Refer to any Technical Service Bulletins that may apply to this condition.
3. With the scan tool, clear DTCs in the Tire Pressure Monitoring (TPM) Module.
4. Test Drive the vehicle for a minimum of 10 minutes with vehicle speed greater than 24 km/h (15 mph).
5. With the scan tool, select View DTCs in the Tire Pressure Monitoring (TPM) Module.

Does the DTC reset or is the status Active for this DTC?

Yes

- Return to the beginning of this test and perform the diagnostic procedure as necessary.

No

- Test complete.

C1503-TIRE PRESSURE SENSOR 3 INTERNAL