Vehicle Speed Sensor Circuit

**DISREGARD DIAGNOSTIC TROUBLE CODE 24 IF SET WHILE DRIVE WHEELS ARE NOT TURNING.**

- Verify speedometer is working, if not, refer to instrument panel gauges and warning indicators.
- Clear diagnostic trouble code (DTC) from engine control module (ECM) and retest. If diagnostic trouble code resets, proceed with DTC 24 Chart.

1. **RAISE DRIVE WHEELS**
   - With engine idling in gear, "SCAN TOOL" should display vehicle speed above 10.
   - Does it?

   - **NO**
   - **DOES SPEEDOMETER WORK?**
     - **NO**
     - Using a DVOM, backprobe ECM terminal "D8" with drive wheel rotating. Voltage should be varying. Is it?
       - **NO**
       - Open in white wire or faulty speedometer and/or speedometer wiring circuit
       - **YES**
       - Poor connection at ECM or faulty ECM
       - Check for open in white wire at ECM terminal "D8". If OK, replace ECM.

   - **YES**

   - **DOES SPEEDOMETER WORK?**
     - **YES**
     - DTC 24 is intermittent. If no additional diagnostic trouble codes were stored, refer to "Diagnostic AIDS"

CLEAR DTC(S) AND CONFIRM "CLOSED LOOP" OPERATION AND NORMAL "CHECK ENGINE" MALFUNCTION INDICATOR LAMP OPERATION.

**DTC 24 VSS Circuit Test**

Circuit Description

Vehicle speed information is provided to the Engine Control Module (ECM) by the Vehicle Speed Sensor (VSS), which alternately grounds WHT wire located in the meter panel when the drive wheels are turning. This pulsed action takes place 4096 times per mile, and the ECM will calculate vehicle speed based on the time between "pulses". 
Test Description

Numbers below refer to circled numbers on the diagnostic chart.

1. Diagnostic Trouble Code (DTC) 24 will set if vehicle speed equals 0 mile per hour when:
   - Engine speed is between 1600 and 1825 revolution per minute.
   - Vehicle speed is indicated less than 1 Km/H (0.6 mile per hour).
   - Manifold absolute pressure reading below 20.7 kPa.
   - Low speed condition (low manifold absolute pressure voltage, high manifold vacuum)
   - Not in park or neutral. (A/T)
   - All conditions are met simultaneously for 1.5 seconds.
   - No DTC 33 is set.

   These conditions are met during a road load deceleration. Disregard DTC 24 that sets when drive wheels are not turning.

Diagnostic Aids

"Scan tool" should indicate a vehicle speed whenever the drive wheels are turning greater than 0.6 mile per hour. Check the WHT wire for proper connections to be sure they are clean and tight and the harness is routed correctly.

(A/T)- A faulty or misadjusted park/neutral position switch can result in a false DTC 24. Use a "Scan tool" and check for proper signal while in "DRIVE". Refer to CHART C-1A for park/neutral position switch check.

If DTC 24 is intermittent,
See: Initial Inspection and Diagnostic Overview/Diagnostic Strategies/Intermittant Check Procedure