Vehicle Speed Sensor (VSS) ('96 – 98 Models, '99 – 00 D16Y5 engine with M/T)

P0500 The scan tool indicates Diagnostic Trouble Code (DTC) P0500: A malfunction problem in the Vehicle Speed Sensor (VSS) circuit [except A/T (D16Y7, D16Y8 engine)].

P0501 The scan tool indicates Diagnostic Trouble Code (DTC) P0501: A range/performance problem in the Vehicle Speed Sensor (VSS) circuit [A/T (D16Y7, D16Y8 engine)].

— The MIL has been reported on.
— DTC P0500 or P0501 is stored.

Problem verification:
1. Test-drive the vehicle.
2. Check the vehicle speed with the scan tool.

Is the correct speed indicated?

YES → **Intermittent failure, system is OK at this time. Check for poor connections or loose wires at C117 (VSS) and ECM/PCM.**

NO

Check for an open in the ECM/PCM:
1. Turn the ignition switch OFF.
2. Block the rear wheels and set the parking brake.
3. Jack up the front of the vehicle and support it with safety stands.
4. Turn the ignition switch ON (II).
5. Block the right front wheel and slowly rotate the left front wheel.
6. Measure voltage between the ECM/PCM connector terminals C18 and A9.

Does the voltage pulse 0 V and 5 V?

YES → **Substitute a known-good ECM/PCM and recheck. If symptom/indication goes away, replace the original ECM/PCM.**

NO

Check for a short in the ECM/PCM:
1. Turn the ignition switch OFF.
2. Disconnect the ECM/PCM connector C (31P).
3. Turn the ignition switch ON (II).
4. Block the right front wheel and slowly rotate the left front wheel.
5. Measure voltage between the ECM/PCM connector terminals C18 and A9.

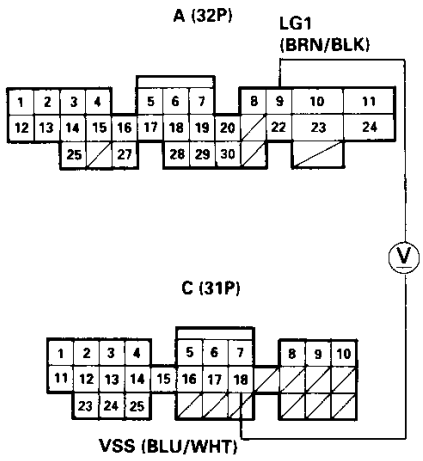
Does the voltage pulse 0 V and 5 V?

YES → **Substitute a known-good ECM/PCM and recheck. If symptom/indication goes away, replace the original ECM/PCM.**

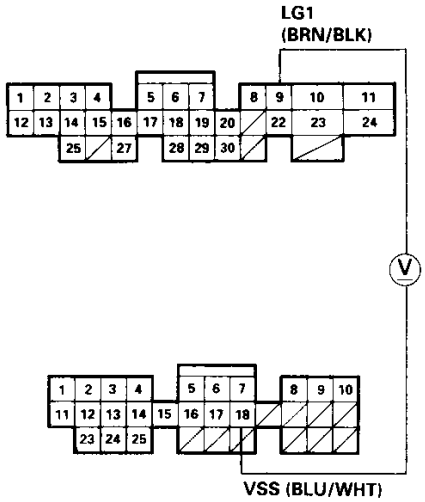
NO

— Repair short in the wire between ECM/PCM (C18) and VSS, TCM.
— Repair open in the wire between ECM/PCM (C18) and VSS.
— If wire is OK, test the VSS (see section 23).

ECM/PCM CONNECTORS



Wire side of female terminals



Vehicle Speed Sensor (VSS) ('99 – 00 Models except D16Y5 engine with M/T)

P0500 The scan tool indicates Diagnostic Trouble Code (DTC) P0500: A malfunction problem in the Vehicle Speed Sensor (VSS) circuit [except A/T (D16Y7, D16Y8 engine)].

P0501 The scan tool indicates Diagnostic Trouble Code (DTC) P0501: A range/performance problem in the Vehicle Speed Sensor (VSS) circuit [A/T (D16Y7, D16Y8 engine)].

— The MIL has been reported on.
— DTC P0500 or P0501 is stored.

Problem verification:
1. Test-drive the vehicle.
2. Check the vehicle speed with the scan tool.

Is the correct speed indicated?

YES → **Intermittent failure, system is OK at this time. Check for poor connections or loose wires at C117 (VSS) and ECM/PCM.**

NO

Check for an open in the ECM/PCM:
1. Turn the ignition switch OFF.
2. Block the rear wheels and set the parking brake.
3. Jack up the front of the vehicle and support it with safety stands.
4. Turn the ignition switch ON (II).
5. Block the right front wheel and slowly rotate the left front wheel.
6. Measure voltage between the ECM/PCM connector terminals C23 and B20.

Does the voltage pulse 0 V and 5 V or battery voltage?

YES → **Substitute a known-good ECM/PCM and recheck. If symptom/indication goes away, replace the original ECM/PCM.**

NO

Check for a short in the ECM/PCM:
1. Turn the ignition switch OFF.
2. Disconnect the ECM/PCM connector C (31P).
3. Turn the ignition switch ON (II).
4. Block the right front wheel and slowly rotate the left front wheel.
5. Measure voltage between the ECM/PCM connector terminals C23 and B20.

Does the voltage pulse 0 V and 5 V or battery voltage?

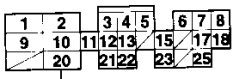
YES → **Substitute a known-good ECM/PCM and recheck. If symptom/indication goes away, replace the original ECM/PCM.**

NO

— Repair short in the wire between ECM/PCM (C23) and VSS, TCM.
— Repair open in the wire between ECM/PCM (C23) and VSS.
— If wire is OK, test the VSS (see section 23).

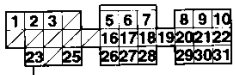
ECM/PCM CONNECTORS

B (25P)



LG1 (BRN/BLK)

C (31P)

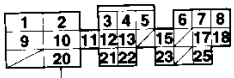


VSS (BLU/WHT)

Wire side of female terminals

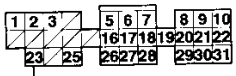
ECM/PCM CONNECTORS

B (25P)



LG1 (BRN/BLK)

C (31P)



VSS (BLU/WHT)

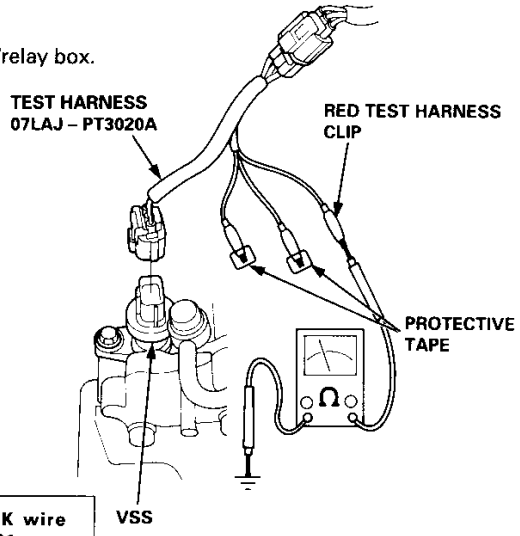
Wire side of female terminals

Vehicle Speed Sensor (VSS)

Troubleshooting

Before testing, inspect the No. 15 (7.5 A) fuse in the under-dash fuse/relay box.

Test the BLK wire:
1. Disconnect the 3P connector from the vehicle speed sensor (VSS).
2. Connect the test harness (07LAJ – PT30200) only to the engine wire harness.
3. Connect the RED test harness clip to the positive probe of a ohmmeter.
4. Check for continuity between the RED test harness clip and body ground.

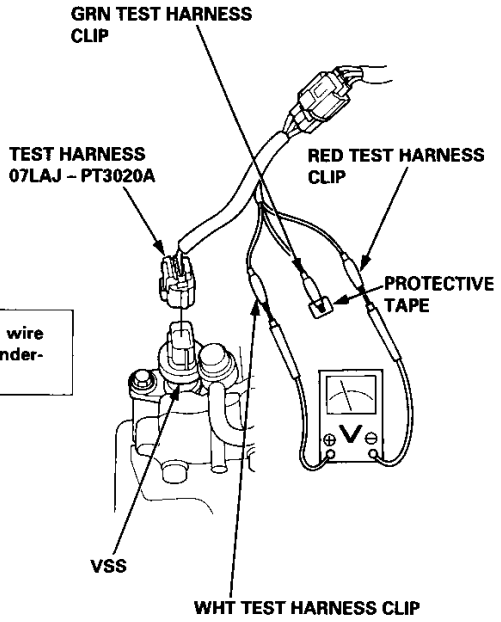


Is there continuity?

NO → **Repair open in the BLK wire between the VSS and G101.**

YES

Test the BLK/YEL wire:
1. Connect the WHT test harness clip to the positive probe of a voltmeter, and connect the RED test harness clip to the negative probe.
2. Turn the ignition switch ON (II).



Is there battery voltage?

NO → **Repair open in the BLK/YEL wire between the VSS and the under-dash fuse/relay box.**

YES

A

(To next page)

(From previous page)

A

Test the BLU/WHT wire:
Connect the GRN test harness clip to the positive probe of a voltmeter, and connect the RED test harness clip to the negative probe.

Is there about 5 V or more ?

NO → **Repair open in the BLU/WHT wire between the VSS and ECM/PCM, TCM (CVT), and cruise control unit.**

YES

Test the VSS:
1. Turn the ignition switch OFF.
2. Connect the other test harness connector to the VSS.
3. Raise the front of the vehicle, and support it with safety stands.
4. Put the vehicle in neutral with the ignition switch ON (II).
5. Slowly rotate one wheel with the other wheel blocked.

Does voltage pulse from 0 to approx. 5 V or more ?

NO → **Replace the VSS.**

YES

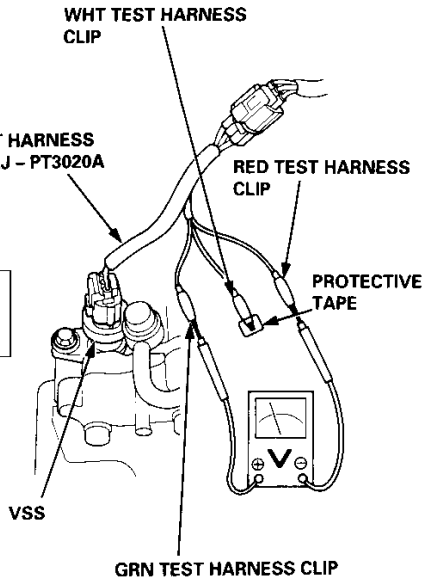
Speedometer Test:
1. Disconnect the 16P connector "B" from the gauge assembly.
2. Touch a probe to the BLU/WHT wire, and connect it to body ground through a voltmeter.
3. Slowly rotate one wheel with the other wheel blocked.

Does the meter indicate pulsing voltage?

NO → **Repair open in the BLU/WHT wire between the VSS and the speedmeter.**

YES

Replace the speedometer.



GAUGE ASSEMBLY 16P CONNECTOR "B"