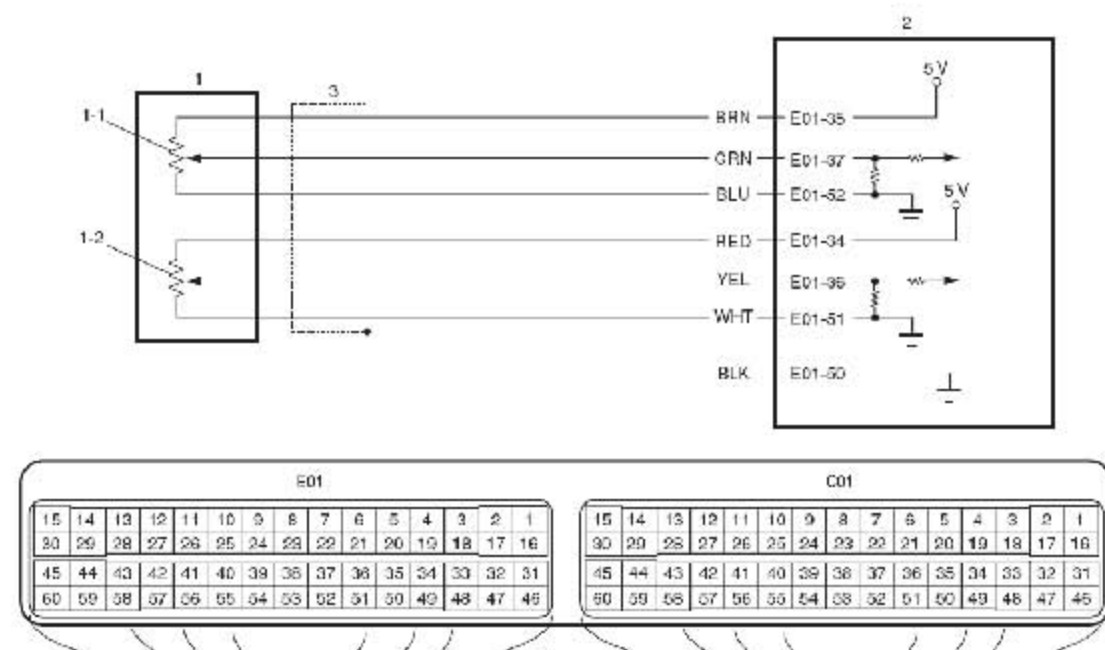


# P2138: Pedal Position Sensor (Main / Sub) Voltage Correlation

## Wiring Diagram



1. APP sensor assembly	1-2. APP sensor (sub)	3. Ground of APP sensor for shield wire
1-1. APP sensor (main)	2. ECM	

## DTC Detecting Condition and Trouble Area

DTC detecting condition	Trouble area
Difference between the opening angle based on APP sensor (main) and the opening angle based on APP sensor (sub) is more than specification for specified time. (1 driving detection logic)	<ul style="list-style-type: none"> <li>• APP sensor (main) and (sub) circuit</li> <li>• APP sensor assembly</li> <li>• ECM</li> </ul>

## DTC Confirmation Procedure

- 1) With ignition switch turned OFF, connect scan tool.
- 2) Turn ON ignition switch and clear DTC using scan tool.
- 3) Keep the accelerator pedal at idle position for 2 seconds.
- 4) Keep the accelerator pedal at fully depressed position for 2 seconds.
- 5) Repeat Step 3) and 4) for 3 times.

6) Check DTC.

## DTC Troubleshooting

Step	Action	Yes	No
1	Was "Engine and Emission Control System Check" performed?	Go to Step 2.	Go to "Engine and Emission Control System Check".
2	APP sensor and its circuit check 1) Connect scan tool to DLC with ignition switch turned OFF. 2) Turn ON ignition switch. 3) Check each voltage of "APP Sensor 1 Volt" and "APP Sensor 2 Volt" displayed on scan tool when accelerator pedal is idle position and fully depressed. Is each APP sensor voltage within specified value in the table "Scan Tool Data"?	Intermittent trouble. Check for intermittent referring to "Intermittent and Poor Connection Inspection in Section 00".	Go to Step 3.
3	ECM voltage check 1) Disconnect connector from APP sensor assembly with ignition switch turned OFF. 2) Check for proper connection to APP sensor assembly at "BRN", "GRN", "BLU", "RED", "YEL" and "WHT" wire terminals. 3) If OK, measure voltage between "BRN" wire terminal of APP sensor assembly connector and vehicle body ground, between "RED" wire terminal of APP sensor assembly connector and vehicle body ground with ignition switch turned ON. Is each voltage 4 – 6 V?	Go to Step 6.	Go to Step 4.

Step	Action	Yes	No
4	<p>Wire harness check</p> <p>1) Disconnect connectors from ECM with ignition switch turned OFF.</p> <p>2) Check for proper connection of ECM connector at "E01-35" and "E01-34" terminals</p> <p>3) If OK, measure resistance between "E01-35" terminal of ECM connector and engine ground, between "E01-34" terminal of ECM connector and engine ground.</p> <p>Is each resistance infinity?</p>	Go to Step 5.	"BRN" wire or "RED" wire is shorted to other circuit.
5	<p>Wire harness check</p> <p>1) Measure voltage between "E01-35" terminal of ECM connector and engine ground, between "E01-34" terminal of ECM connector and engine ground with ignition switch turned ON.</p> <p>Is each voltage 0 V?</p>	Substitute a known-good ECM and recheck.	"BRN" wire or "RED" wire is shorted to other circuit.