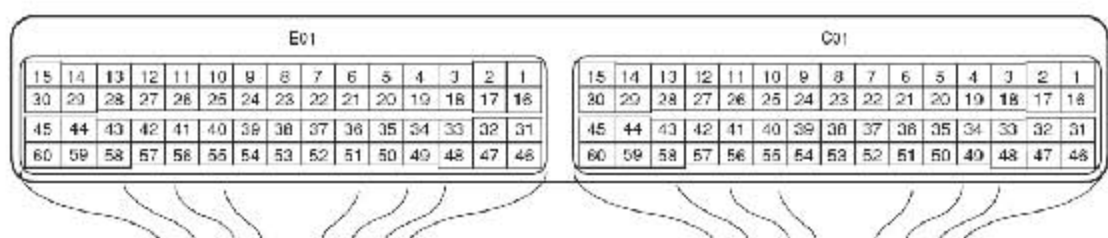
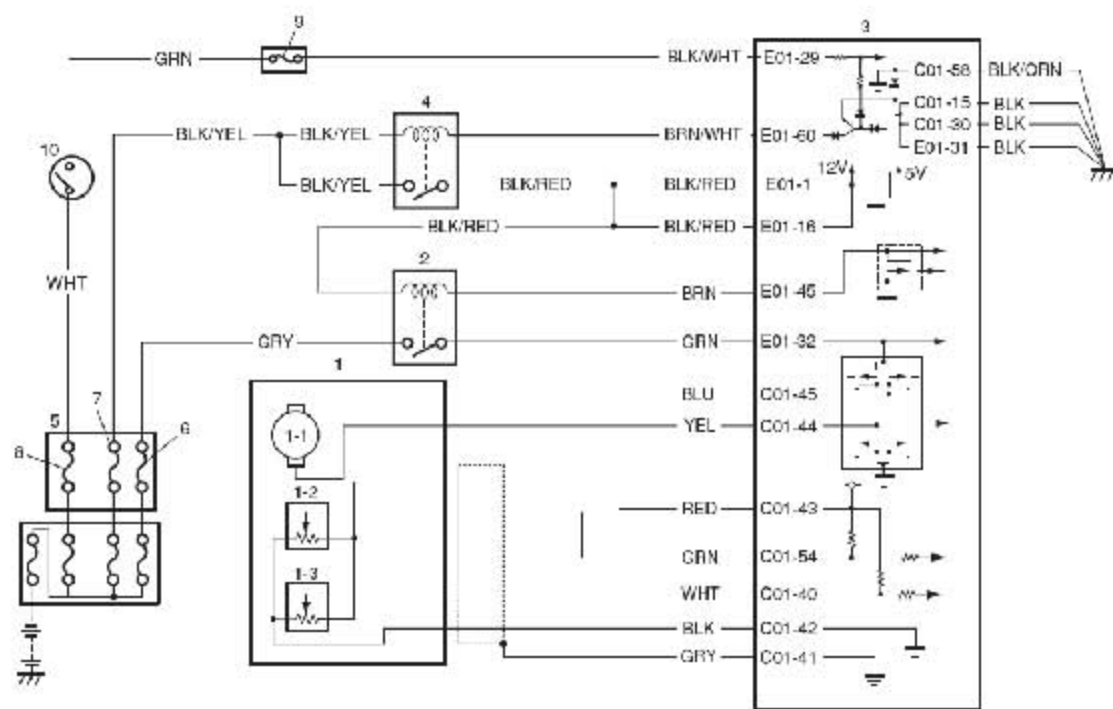


P2135: Throttle Position Sensor (Main / Sub) Voltage Correlation

Wiring Diagram



DTC Detecting Condition and Trouble Area

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

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	Throttle position sensor and its circuit check 1) Connect scan tool to DLC with ignition switch turned OFF. 2) Turn ON ignition switch, check each voltage of "TP Sensor 1 Volt" and "TP Sensor 2 Volt" displayed on scan tool when accelerator pedal is idle position and fully depressed. Is each TP 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 electric throttle body assembly with ignition switch turned OFF. 2) Check for proper connection to electric throttle body assembly at "RED", "GRN", "WHT" and "BLK" wire terminals. 3) If OK, measure voltage between "RED" wire terminal of electric throttle body assembly connector and engine ground with ignition switch turned ON.	Go to Step 6.	Go to Step 4.

	Is voltage 4 – 6 V?		
Step	Action	Yes	No
4	Wire harness check 1) Disconnect connectors from ECM with ignition switch turned OFF. 2) Measure resistance between "C01-43" terminal of ECM connector and engine ground. Is resistance infinity?	Go to Step 5.	"RED" wire is shorted to other circuit.
5	Wire harness check 1) Measure voltage between "C01-43" terminal of ECM connector and engine ground with ignition switch turned ON. Is voltage 0 V?	Substitute a known-good ECM and recheck.	"RED" wire is shorted to other circuit.
6	Wire harness check 1) Measure voltage between "GRN" wire terminal of electric throttle body assembly connector and engine ground, between "WHT" wire terminal of electric throttle body assembly connector and engine ground with ignition switch turned ON. Is each voltage 4 – 6 V?	Go to Step 9.	Go to Step 7.
7	Wire harness check 1) Turn OFF ignition switch. 2) Disconnect connectors from ECM. 3) Check for proper connection of ECM connector at "C01-54" and "C01-40" terminals. 4) If OK, measure voltage between "C01-54" terminal of ECM connector and engine ground, between "C01-40" terminal of ECM connector and engine ground. Is each voltage 0 V?	Go to Step 8.	"GRN" wire or "WHT" wire is shorted to other circuit.

8	Wire harness check 1) Measure resistance between "GRN" wire terminal of electric throttle body assembly connector and engine ground, between "WHT" wire terminal of electric throttle body assembly connector and engine ground with ignition switch turned OFF. Is each resistance infinity?	Substitute a known-good ECM and recheck.	"GRN" wire or "WHT" wire is shorted to other circuit.
Step	Action	Yes	No
9	Electric throttle body assembly check 1) Check throttle position sensor referring to "Throttle Position Sensor Performance Check" under "Electric Throttle Body Assembly On-Vehicle Inspection in Section 1C". Is each output voltage within specified value?	Substitute a known-good ECM and recheck.	Replace electric throttle body assembly.

LAUNCH