

# P2102: Throttle Actuator Control Motor Circuit Low

## Wiring Diagram

Refer to "DTC P2101: Throttle Actuator Control Motor Circuit Range / Performance".

## DTC Detecting Condition and Trouble Area

DTC detecting condition	Trouble area
Power supply voltage of throttle actuator control circuit is lower than specified value for specified time even if throttle actuator control relay is turned on. (1 driving detection logic)	<ul style="list-style-type: none"><li>• Throttle actuator control relay circuit</li><li>• Throttle actuator control relay</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) Start engine and run it for 1 min. or more.
- 4) 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 actuator control relay circuit check 1) Remove ECM from its bracket with ECM connectors connected. 2) Check for proper connection of ECM connector at "E01-45" and "E01-32" terminals. 3) Turn ON ignition switch. 4) Measure voltage between "E01-32" terminal of ECM connector and engine ground. Is voltage 10 – 14 V?	Intermittent trouble. Check for intermittent referring to "Intermittent and Poor Connection Inspection in Section 00".	Go to Step 3.
3	Is "THR MOT" fuse in good condition?	Go to Step 4.	Replace fuse and check for short in circuits connected to this fuse.
4	Throttle actuator control relay circuit check 1) Remove throttle actuator control relay from individual circuit fuse box No.1 with ignition switch turned OFF. 2) Check for proper connection to throttle actuator control relay at "BLK/RED", "GRY", "BRN" and "GRN" wire terminals. 3) Measure voltage between engine ground and each "BLK/RED", "GRY" wire terminal with ignition switch turned ON. Is each voltage 10 – 14 V?	Go to Step 5.	"BLK/RED" wire and/or "GRY" wire is open or high resistance.

Step	Action	Yes	No
5	Throttle actuator control relay circuit check 1) Disconnect connectors from ECM with ignition switch turned OFF. 2) Measure resistance at following connector terminals. • Between "BRN" wire terminal of throttle actuator control relay connector and "E01-45" terminal of ECM connector • Between "GRN" wire terminal of throttle actuator control relay connector and "E01-32" terminal of ECM connector Is each resistance below 5 Ω?	Go to Step 6.	"BRN" wire and/or "GRN" wire is open or high resistance.
6	Throttle actuator control relay check 1) Check throttle actuator control relay referring to "Main Relay, Fuel Pump Relay, Starting Motor Control Relay, Throttle Actuator Control Relay and Radiator Cooling Fan Relay Inspection in Section 1C". Is it in good condition?	Substitute a known-good ECM and recheck.	Replace throttle actuator control relay.