

DTC P0510 Closed Throttle Position Switch Malfunction

CIRCUIT DESCRIPTION

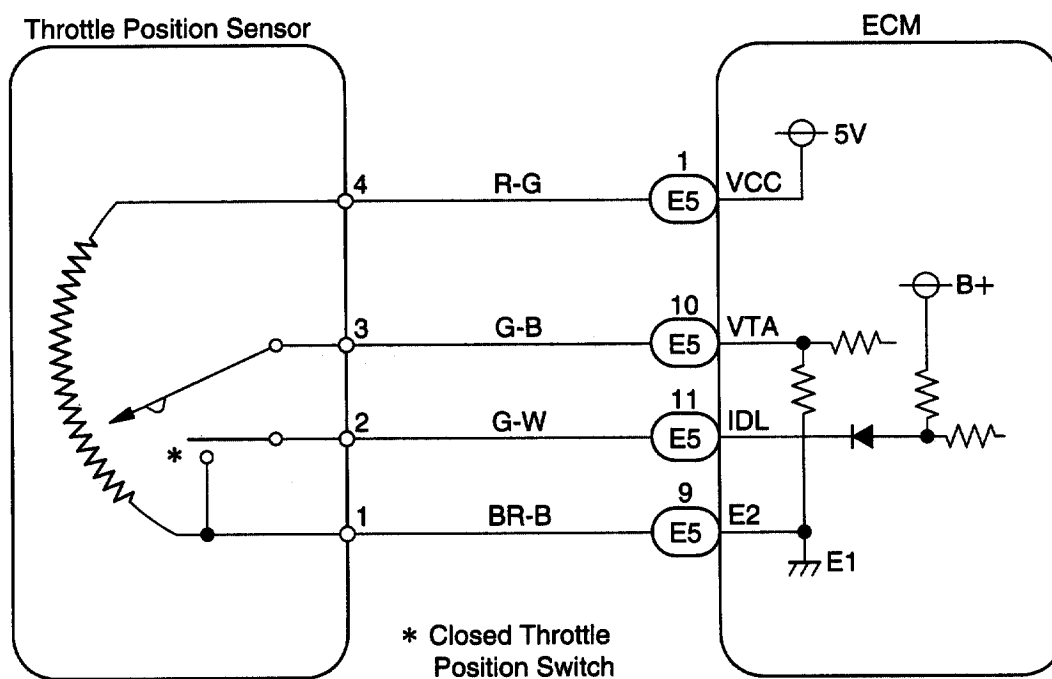
Refer to Throttle Position Circuit on page [EG-258](#).

DTC No.	Diagnostic Trouble Code Detecting Condition	Trouble Area
P0510	The closed throttle position switch does not turn ON even once when the vehicle is driven (2 trip detection logic)	- Open in closed throttle position switch circuit - Closed throttle position switch - ECM

HINT: After confirming DTC P0510 use the TOYOTA hand-held tester to confirm the closed throttle position switch signal from "CURRENT DATA".

Throttle Valve	Closed throttle position Switch Signal	Malfunction
Fully Closed	OFF	Open Circuit
Fully Open	ON	Short Circuit

WIRING DIAGRAM



INSPECTION PROCEDURE

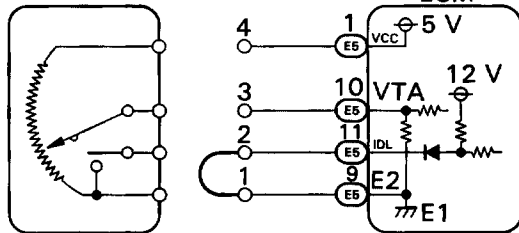
HINT: If diagnostic trouble codes "P0110" (intake air temp. circuit malfunction), "P0115" (engine coolant temp. circuit malfunction) and "P0120" (throttle position circuit malfunction) are output simultaneously, E2 (sensor ground) may be open.

TOYOTA hand-held tester

1 Check for open in harness or ECM.



Throttle Position Sensor



BE6653
FI7058

NG

- P**
- (1) Remove the fuse cover on the instrument panel.
 - (2) Connect the TOYOTA hand-held tester to the DLC3.
 - (3) Disconnect the throttle position sensor connector.
 - (4) Connect sensor wire harness terminals between terminals 1 and 2.
 - (5) Turn ignition switch ON.

C Read CTP switch signal on the TOYOTA hand-held tester.

OK CTP switch signal: ON

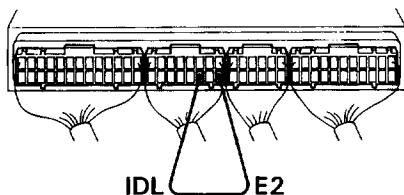
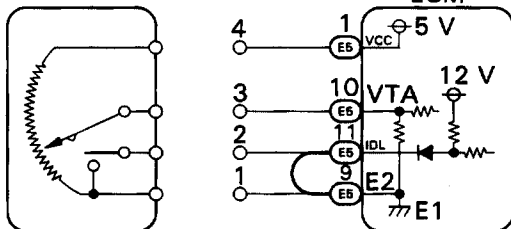
OK

Confirm good connection at sensor. If OK, replace throttle position sensor.

2 Check for open in harness or ECM.



Throttle Position Sensor



BE6653
FI7064
P22171

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- P**
- (1) Remove instrument panel speaker No. 1 panel (See page [EG-173](#)).
 - (2) Connect between terminals IDL and E2 of ECM connector.

HINT: Throttle position sensor connector is disconnected. Before checking, do a visual check and contact pressure check for the connector (See page [EG-233](#)).

- (3) Turn ignition switch ON.

C Read CTP switch signal on the TOYOTA hand-held tester.

OK CTP switch signal: ON

OK

Open in harness between ECM and throttle position sensor, repair or replace harness.

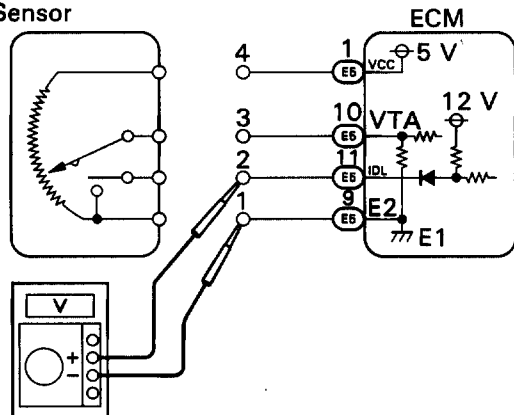
Confirm connection at ECM. If OK, replace ECM.

OBD II scan tool (excluding TOYOTA hand-held tester)

1 Check for open in harness or ECM.



Throttle Position Sensor



BE6653
FI7065

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- P** (1) Disconnect the throttle position sensor connector.
(2) Turn ignition switch ON.

C Measure voltage between terminals 1 and 2 of throttle position sensor connector.

OK Voltage: 9 ~ 14 V

OK

Confirm good connection at sensor. If OK, replace throttle position sensor.

2 Check for open in harness and connector between throttle position sensor and ECM (See page [IN-26](#)).

OK

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Open in harness between ECM and throttle position sensor.

Confirm connection at ECM. If OK, replace ECM.