DTC	P2111/41	THROTTLE ACTUATOR CONTROL SYSTEM – STUCK OPEN

DTC	P2112/41	THROTTLE ACTUATOR CONTROL SYSTEM – STUCK CLOSED

CIRCUIT DESCRIPTION

The throttle motor is operated by the ECM and it opens and closes the throttle valve using gears. The opening angle of the throttle valve is detected by the throttle position sensor which is mounted on the throttle body. And, it provides feedback to the ECM to control the throttle motor in order to make the throttle valve opening angle properly in response to the driving condition. If this malfunction is detected, the ECM shuts down the power for the throttle motor, and the throttle valve is fully closed by the return spring. And the throttle valve is locked at a certain opening angle. Also, the whole electronically controlled throttle operation is cancelled until the system returns to normal and the ignition switch is turned OFF.

HINT:

This electrical throttle system is no used throttle cable.

DTC No.	DTC Detection Condition	Trouble Area
P2111/41	The throttle motor locked during control by the ECM (Stuck open)	• Throttle control motor circuit • Throttle control motor • Throttle w/ motor body • Throttle valve
P2112/41	The throttle motor locked during control by the ECM (Stuck closed)	

WIRING DIAGRAM

Refer to DTC P2102/41 on page 05–162.

INSPECTION PROCEDURE

HINT:

Read freeze frame data using the hand–held tester, as freeze frame data records the engine conditions when a malfunction is detected. When troubleshooting, it is useful for determining whether the vehicle was running or stopped, the engine was warmed up or not, the air–fuel ratio was lean or rich, etc. at the time of the malfunction.

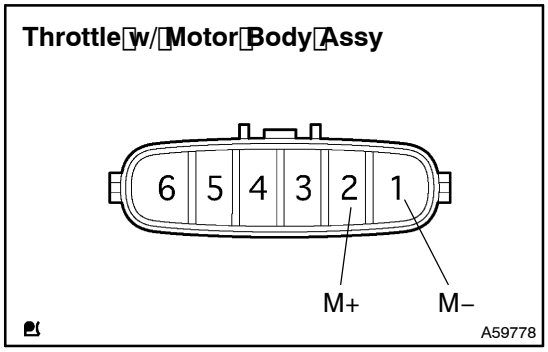
1	INSPECT THROTTLE W/MOTOR BODY ASSY(VISUALLY CHECK THROTTLE VALVE)

(a) Check it a foreign object has been caught between the throttle valve and the housing.

NG → REMOVE FOREIGN OBJECT AND CLEAN THROTTLE BODY

OK

2 INSPECT THROTTLE W/MOTOR BODY ASSY (RESISTANCE OF THROTTLE CONTROL MOTOR)

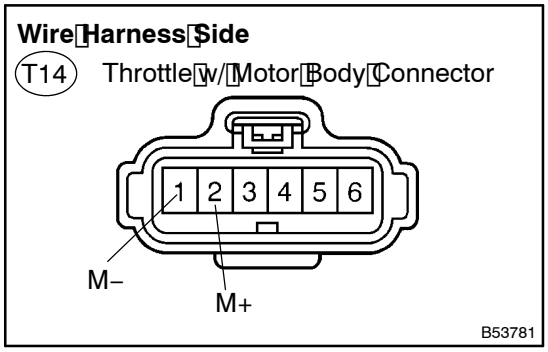


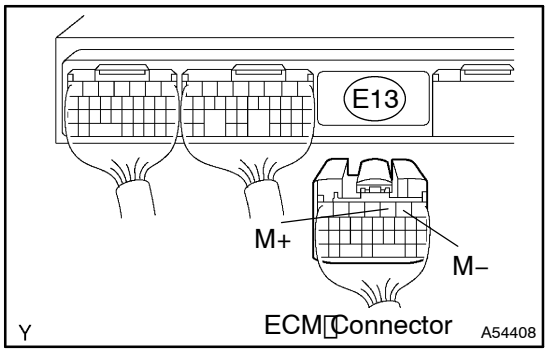
(a) Disconnect the throttle w/ motor body connector.
(b) Measure the motor resistance between terminals M+ and M–.
Motor resistance: 0.3 to 100 Ω at 20°C (68°F)

NG → **REPLACE THROTTLE W/MOTOR BODY ASSY**

OK

3 CHECK HARNESS AND CONNECTOR (THROTTLE CONTROL MOTOR – ECM)





(a) Disconnect the throttle w/ motor body connector.
(b) Disconnect the E13 ECM connector.
(c) Check for continuity between the wire harness side connectors.

Standard (Check for open):

Symbols (Terminal No.)	Specified condition
M+ (T14–2) – M+ (E13–3)	Continuity
M– (T14–1) – M– (E13–2)	

Standard (Check for short):

Symbols (Terminal No.)	Specified condition
M+ (T14–2) or M+ (E13–3) – Body ground	No continuity
M– (T14–1) or M– (E13–2) – Body ground	

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

CHECK FOR INTERMITTENT PROBLEMS (See page 05–7)