DTC	P2111	THROTTLE ACTUATOR CONTROL SYSTEM – STUCK OPEN

DTC	P2112	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. The throttle position sensor provides to ECM with feedback to control the throttle motor and set the throttle valve angle in response to driver input.

HINT:

This Electrical Throttle Control System (ETCS) does not use a throttle cable.

DTC No.	DTC Detection Condition	Trouble Area
P2111	Throttle motor locked during ECM orders to open	• Throttle control motor circuit • Throttle control motor • Throttle body • Throttle valve
P2112	Throttle motor locked during ECM orders to close	• Throttle control motor circuit • Throttle control motor • Throttle body • Throttle valve

WIRING DIAGRAM

Refer to DTC P2102 on page 05–154.

INSPECTION PROCEDURE

HINT:

Read freeze frame data using the intelligent tester II. Freeze frame data records the engine condition when malfunction is detected. When troubleshooting, freeze frame data can help determine if the vehicle was running or stopped, if the engine was warmed up or not, if the air–fuel ratio was lean or rich, and other data from the time the malfunction occurred.

1	CHECK OTHER DTC OUTPUT(IN ADDITION TO DTC P2111 AND/OR P2112)

(a) Connect the intelligent tester II to the DLC3.
(b) Turn the power switch ON (IG).
(c) Turn the intelligent tester II ON.
(d) On the intelligent tester II, select the item: Powertrain / Engine and ECT / DTC.
(e) Read DTCs.

Result:

Display (DTC Output)	Proceed to
P2111 or P2112	A
P2111 or P2112, and other DTCs	B

HINT:

If any other codes besides P2111 and/or P2112 are output, perform troubleshooting for those DTCs first.

B → GO TO RELEVANT DTC CHART (See page 05–39)

A

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

(a) Check for contamination between the throttle valve and its housing. If necessary, clean the throttle body. And check that the throttle valve moves smoothly.

NG → REPLACE THROTTLE W/MOTOR BODY ASSY

OK

3 CHECK DTC OUTPUT(IN ADDITION TO DTC P2111 AND/OR P2112 ARE OUTPUT AGAIN)

(a) Connect the intelligent tester II to the DLC3.
(b) Turn the power switch ON (IG).
(c) Turn the intelligent tester II ON.
(d) Clear the DTC.
(e) Put the engine in inspection mode (see page 05–1).
(f) Start the engine, and depress and release the accelerator pedal quickly (fully opens and closes the throttle valve).
(g) On the intelligent tester II, select the item: Powertrain / Engine and ECT / DTC.
(h) Start the engine, and depress and release the accelerator pedal quickly (fully opens and closes the throttle valve).
(i) Read DTCs.

Result:

Display (DTC Output)	Proceed to
P2111 and/or P2112	A
No output	B

B → CHECK FOR INTERMITTENT PROBLEMS (See page 05–14)

A

REPLACE ECM (See page 10–24)