DTC	P2119/89	THROTTLE ACTUATOR CONTROL THROTTLE BODY RANGE/PERFORMANCE

CIRCUIT DESCRIPTION

The Electric Throttle Control System (ETCS) is composed of the throttle motor to operate the throttle valve, the throttle position sensor to detect the opening angle of the throttle valve, the accelerator pedal position sensor to detect the accelerator pedal position, the ECM to control the ETCS, and is the one valve type throttle body.

The ECM controls the throttle motor to provide the proper throttle valve opening angle in response to the driving condition.

The throttle position sensor which is mounted on the throttle body detects the opening angle of the throttle valve, and it provides feedback to the ECM to control the throttle motor.

If the ETCS has a malfunction, 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.

DTC No.	DTC Detection Condition	Trouble Area
P2119/89	Throttle opening angle continues to vary greatly from target throttle opening angle	• Electric throttle control system • ECM

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	CHECK OTHER DTC OUTPUT (BESIDES DTC P2119/89)

(a) Read the DTC.

Result:

Display (DTC output)	Proceed to
Only P2119/89 is output	A
P2119/89 and other DTC are output	B

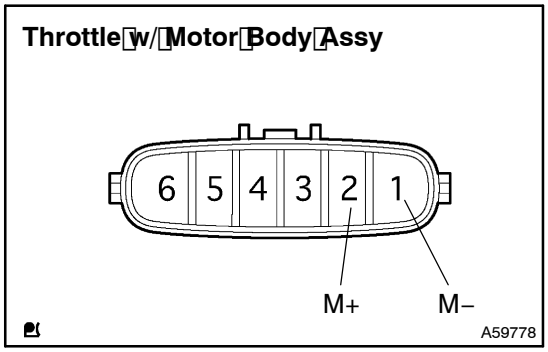
HINT:

If any other codes besides P2119/89 are output, perform the troubleshooting for those DTCs first.

B → GO TO RELEVANT DTC CHART (See page 05–22)

A

2	INSPECT THROTTLE W/MOTOR BODY ASSY



(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	REPLACE ECM AND CLEAR DTC (CHECK IF DTC OUTPUT RECUR)

(a) Replace the ECM.
(b) Clear the DTC (See page 05–7).
(c) Start and warm up the engine.
(d) Run the engine at idle for 15 sec. or more.
(e) Read the DTC (See page 05–7).
Standard: No DTC output.

OK → **NORMAL**

NG

REPLACE THROTTLE W/MOTOR BODY ASSY