DICTJ–01

DTC	P2119/89*	Throttle Actuator Control Throttle Body Range/Performance

*: ETCS trouble code No. is 32, 38 or 39.

CIRCUIT DESCRIPTION

The Electric Throttle Control System (ETCS) is composed of a throttle motor that operates the throttle valve, a throttle position sensor that detects the opening angle of the throttle valve, an accelerator pedal position sensor that detects the accelerator pedal position, and the engine control ECU that controls the ETCS system.

The engine control ECU operates the throttle motor to position the throttle valve for proper response to driver inputs. The throttle position sensor, mounted on the throttle body, detects the opening angle of the throttle valve and provides this signal to the engine control ECU so that the engine control ECU can regulate the throttle motor.

DTC No.	DTC Detection Condition	Trouble Area
P2119/89	Throttle opening angle continues to vary greatly from target throttle opening angle (1 trip detection logic)	• Electric throttle control system • Throttle body

MONITOR DESCRIPTION

The engine control ECU determines the "actual" throttle angle based on the throttle position sensor signal. The "actual" throttle position is compared to the "target" throttle position commanded by the engine control ECU. If the difference of these two values exceeds a specified limit, the engine control ECU interprets this as a fault in the ETCS (Electronic Throttle Control System). The engine control ECU turns on the MIL and a DTC is set.

The monitor runs after the engine is started, and the accelerator pedal is fully depressed to 5,000 rpm and fully released quickly.

FAIL SAFE

If the ETCS (Electronic Throttle Control System) has a malfunction, the engine control ECU cuts off current to the throttle control motor. The throttle control valve returns to a predetermined opening angle (approximately 16°) by the force of the return spring. The engine control ECU then adjusts the engine output by controlling the fuel injection (intermittent fuel–cut) and ignition timing in accordance with the accelerator pedal opening angle to enable the vehicle to continue at a minimum speed.

If the accelerator pedal is depressed firmly and slowly, the vehicle can be driven slowly.

If a "pass" condition is detected and then the ignition switch is turned OFF, the fail–safe operation will stop and the system will return to normal condition.

WIRING DIAGRAM

Refer to DTC P2102 and P2103 on page DI–206.

INSPECTION PROCEDURE

HINT:

Read freeze frame data using the hand–held tester. Freeze frame data records the engine conditions when a 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, as well as other data from the time when a malfunction occurred.

1	Are there any other codes (besides DTC P2119) being output?

PREPARATION:

(a) Connect the hand–held tester to the DLC3.
(b) Turn the ignition switch ON and push the hand–held tester main switch ON.
(c) When using hand–held tester, enter the following menus: DIAGNOSIS / OBD/MOBD / DTC INFO / CURRENT CODES.

CHECK:

Read the DTC using the hand–held tester.

RESULT:

Display (DTC Output)	Proceed to
P2119	A
"P2119" and other DTC	B

HINT:

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

B → Go to relevant DTC chart (See page DI–19).

A

2	Check if DTC output recur

(a) Clear the DTC.
(b) Allow the engine to idle for 15 seconds.
(c) Pull up the hand brake and move the shift lever to the D position.
(d) Fully depress the brake pedal and the accelerator pedal for 5 seconds.
(e) Read the DTC.

HINT:

Actual throttle position sensor voltage can be confirmed using with the hand–held tester.

OK: **No DTC output.**

NG → **Replace throttle body assy**
(See Pub. No. RM630E, page FI–42)

OK

Normal