DTC	P2118/89	THROTTLE ACTUATOR CONTROL MOTOR CURRENT RANGE/PERFORMANCE

CIRCUIT DESCRIPTION

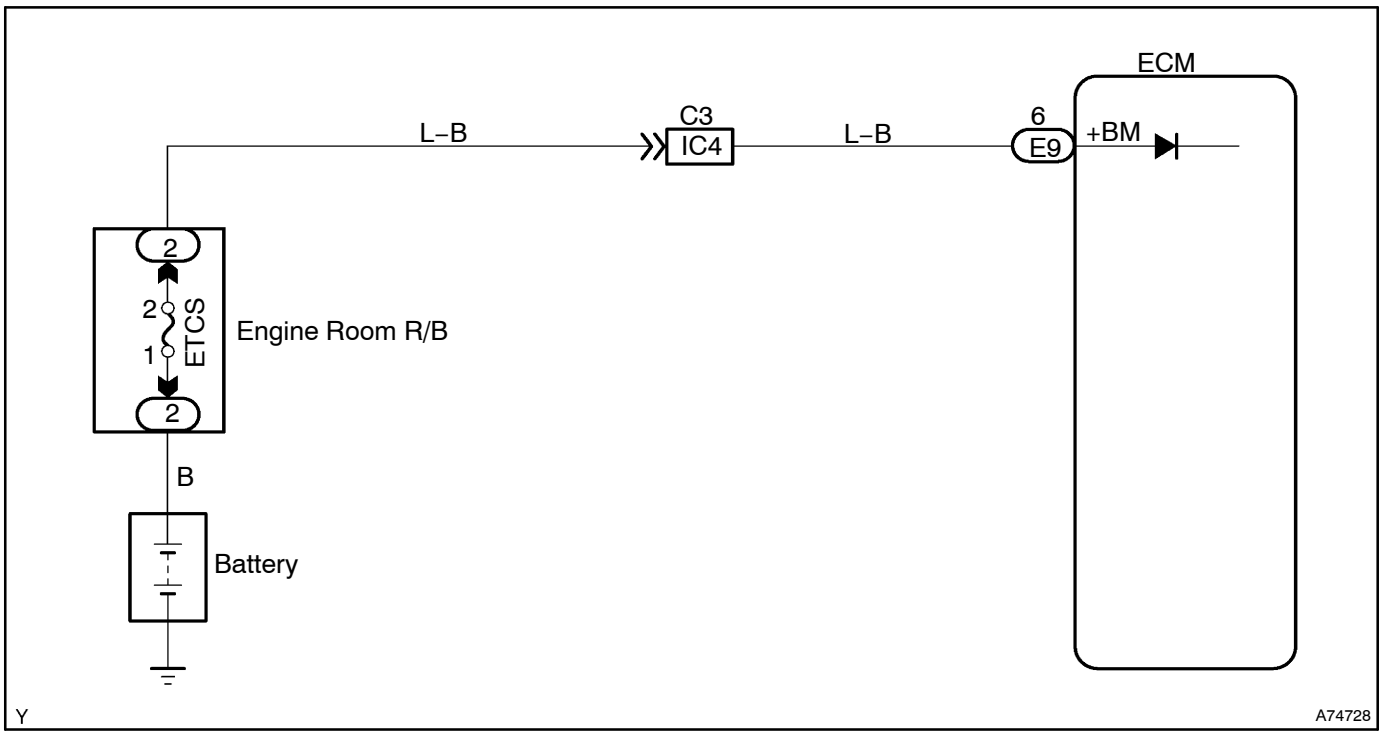
If this malfunction is detected, the ECM shuts down the power for the throttle motor, and the throttle valve is fully closed by the return spring. And the throttle valve is locked at a certain opening angle. Also, the whole electronically controlled throttle operation is cancelled until the system returns to normal and the ignition switch is turned OFF.

HINT:

This electrical throttle control system (ETCS) does not use the throttle cable.

DTC No.	DTC Detection Condition	Trouble Area
P2118/89	Open in ETCS power source circuit	• Open in ETCS power source circuit • ECM

WIRING DIAGRAM

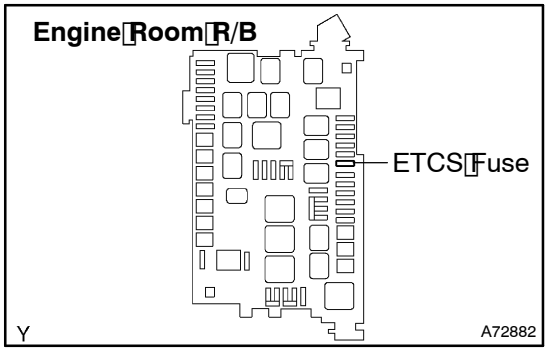


INSPECTION PROCEDURE

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 FUSE (ETCS FUSE)



(a) Remove the ETCS fuse from the engine room R/B.

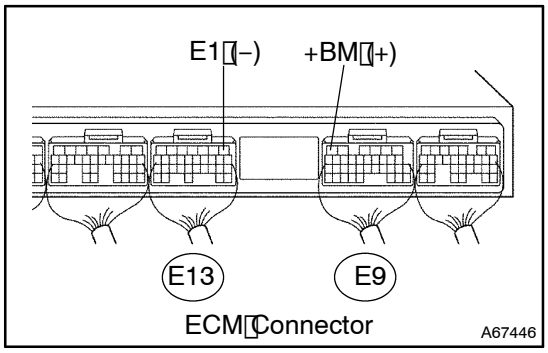
(b) Check for continuity in the ETCS fuse.

Standard: Continuity

NG → **CHECK FOR SHORT IN ALL HARNESSES AND COMPONENTS CONNECTED FUSE**

OK

2 INSPECT ECM (+BM VOLTAGE)



(a) Check the voltage between the terminals of the E9 and E13 ECM connectors.

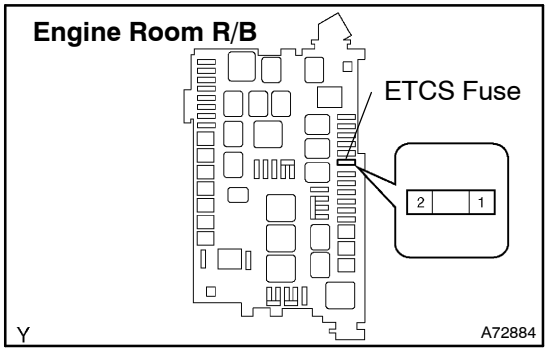
Standard:

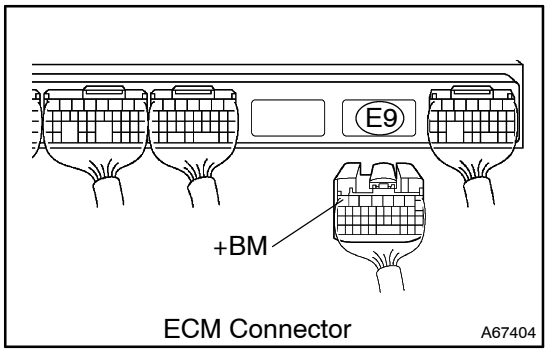
Symbols (Terminal No.)	Specified condition
+BM (E9–6) – E1 (E13–1)	9 to 14 V

OK → **CHECK AND REPLACE ECM (See page 01–35)**

NG

3	CHECK HARNESS AND CONNECTOR(ECM – ETCS FUSE, ETCS FUSE – BATTERY)





(a) Check the harness and the connector between the ETCS fuse and the ECM.
  (1) Remove the ETCS fuse from the engine room R/B.
  (2) Disconnect the E9 ECM connector.
  (3) Check for continuity between the wire harness side connectors.

Standard (Check for open):

Symbols (Terminal No.)	Specified condition
ETCS fuse (2) – +BM (E9–6)	Continuity

Standard (Check for short):

Symbols (Terminal No.)	Specified condition
ETCS fuse (2) or +BM (E9–6) – Body ground	No continuity

(b) Check the harness and the connector between the ETCS fuse and the battery.
  (1) Remove the ETCS fuse from the engine room R/B.
  (2) Disconnect the battery positive terminal.
  (3) Check for continuity between the wire harness side connectors.

Standard (Check for open):

Symbols (Terminal No.)	Specified condition
Battery positive terminal – ETCS fuse (1)	Continuity

Standard (Check for short):

Symbols (Terminal No.)	Specified condition
Battery positive terminal or ETCS fuse (1) – Body ground	No continuity

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

OK

CHECK AND REPLACE ENGINE ROOM RELAY BLOCK