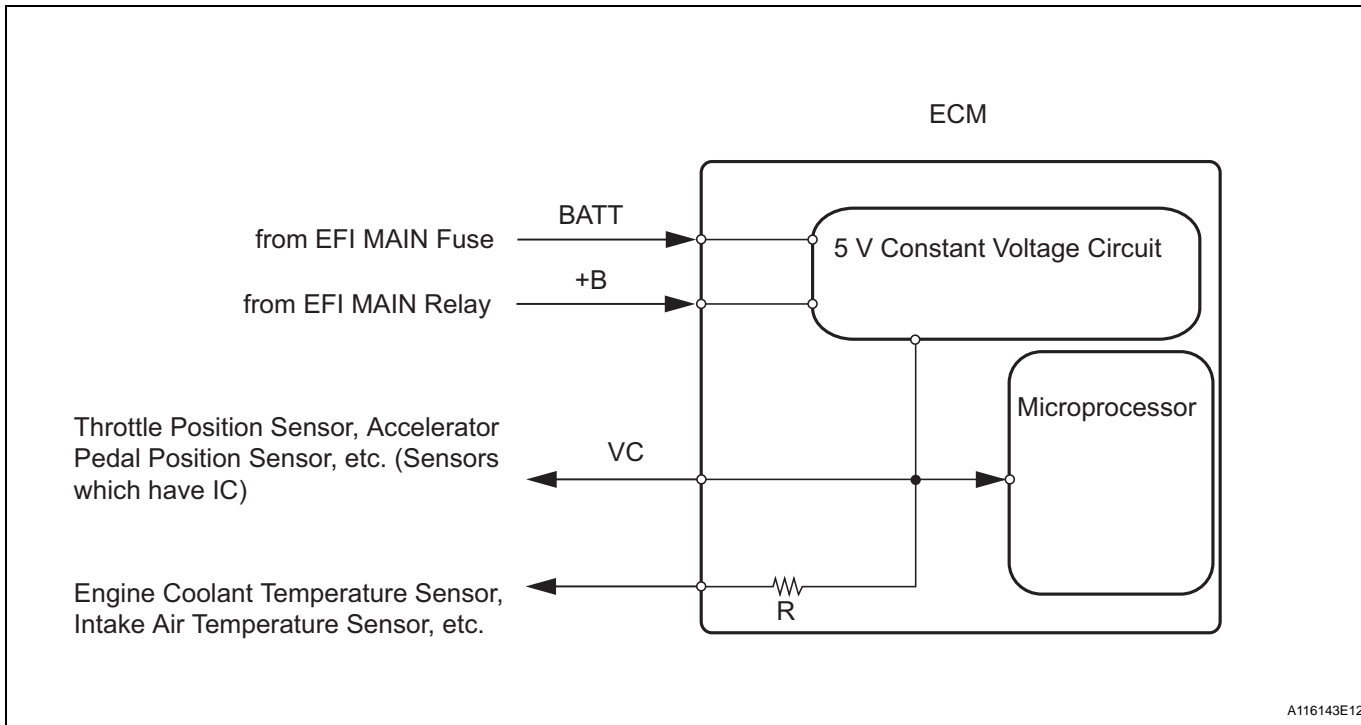


VC Output Circuit

DESCRIPTION

The ECM constantly generates 5 V power from the battery voltages supplied to the +B (BATT) terminal to operate the microprocessor. The ECM also provides this power to the sensors through the VC output circuit.



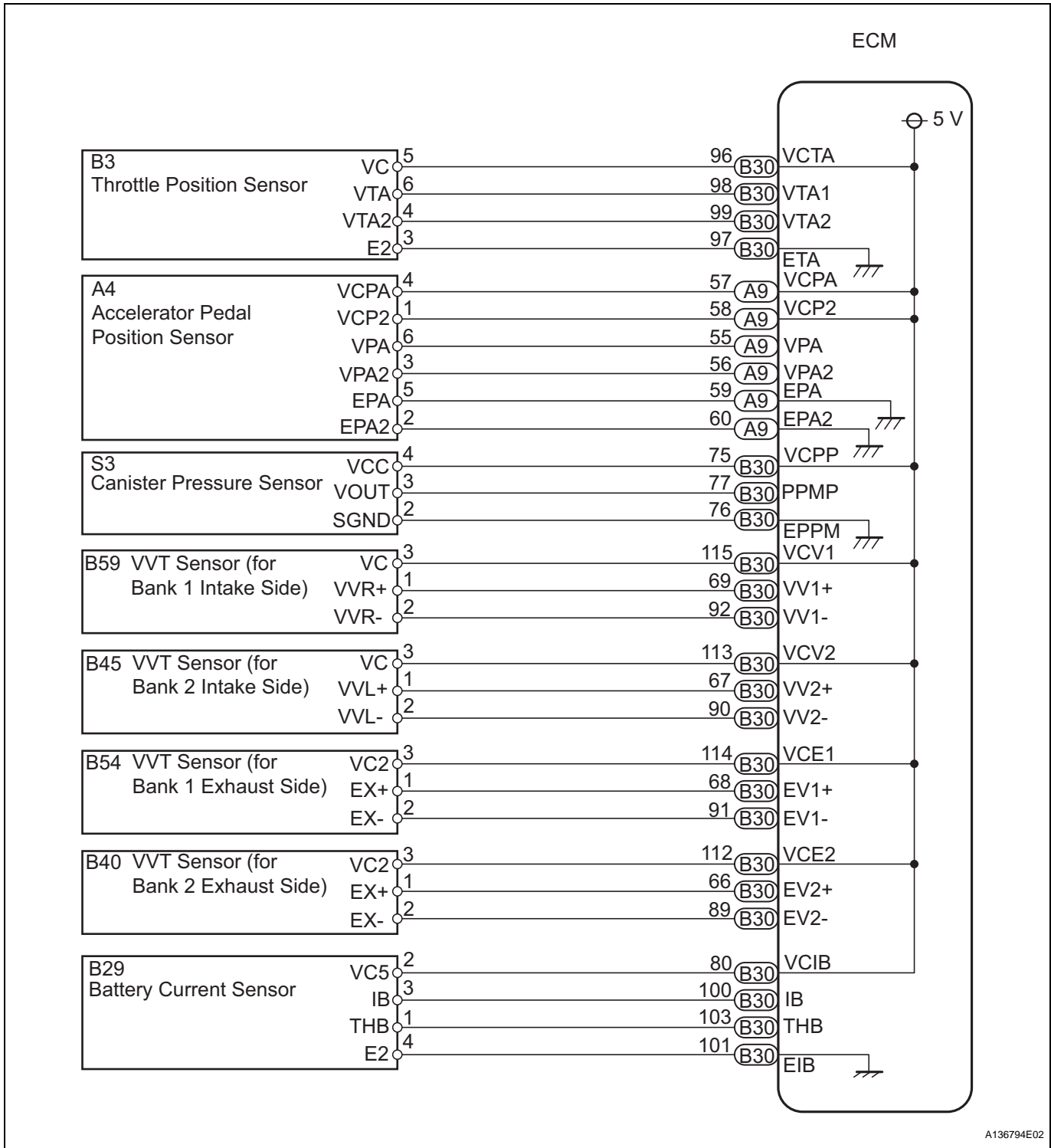
When the VC circuit is short-circuited, the microprocessor in the ECM and sensors that are supplied with power through the VC circuit are inactivated because the power is not supplied from the VC circuit. Under this condition, the system does not start up and the MIL does not illuminate even if the system malfunctions.

HINT:

Under normal conditions, the MIL is illuminated for several seconds when the ignition switch is first turned ON. The MIL goes off when the engine is started.

WIRING DIAGRAM

ES



A136794E02

INSPECTION PROCEDURE

1	CHECK MIL
----------	------------------

- (a) Check that the Malfunction Indicator Lamp (MIL) lights up when turning the ignition switch ON.

OK:
MIL lights up

OK

SYSTEM OK

NG

2

CHECK COMMUNICATION BETWEEN INTELLIGENT TESTER AND ECM

- (a) Connect the intelligent tester to the DLC3.
- (b) Turn the ignition switch ON and tester ON.
- (c) Check the communication between the tester and ECM.

Result

Result	Proceed to
Communication is possible	A
Communication is not possible	B

A

GO TO MIL CIRCUIT

B

3

CHECK MIL (THROTTLE POSITION SENSOR)

- (a) Disconnect the B3 throttle body connector.
- (b) Turn the ignition switch ON.
- (c) Check the MIL.

Result

Result	Proceed to
MIL illuminates	A
MIL does not illuminate	B

- (d) Reconnect the throttle body connector.

A

REPLACE THROTTLE BODY ASSEMBLY

B

4

CHECK MIL (ACCELERATOR PEDAL POSITION SENSOR)

- (a) Disconnect the A4 accelerator pedal position sensor connector.
- (b) Turn the ignition switch ON.
- (c) Check the MIL.

Result

Result	Proceed to
MIL illuminates	A
MIL does not illuminate	B

- (d) Reconnect the accelerator pedal position sensor connector.

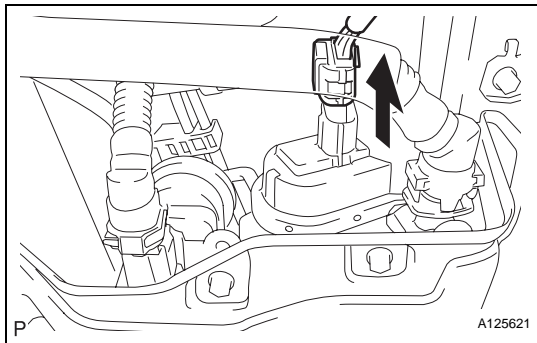
A

REPLACE ACCELERATOR PEDAL POSITION SENSOR

ES

B

5 CHECK MIL (CANISTER PUMP MODULE)



- (a) Disconnect the S3 canister pump module connector.
- (b) Turn the ignition switch ON.
- (c) Check the MIL.

ES

Result

Result	Proceed to
MIL illuminates	A
MIL does not illuminate	B

- (d) Reconnect the canister pump module connector.

A → **REPLACE CHARCOAL CANISTER ASSEMBLY**

B

6 CHECK MIL (BATTERY CURRENT SENSOR)

- (a) Disconnect the B29 battery current sensor connector.
- (b) Turn the ignition switch ON.
- (c) Check the MIL.

Result

Result	Proceed to
MIL illuminates	A
MIL does not illuminate	B

- (d) Reconnect the battery current sensor connector.

A → **REPLACE BATTERY CURRENT SENSOR**

B

7 CHECK MIL (VVT SENSOR FOR BANK 1 INTAKE SIDE)

- (a) Disconnect the B59 VVT sensor connector.
- (b) Turn the ignition switch ON.
- (c) Check the MIL.

Result

Result	Proceed to
MIL illuminates	A
MIL does not illuminate	B

(d) Reconnect the VVT sensor connector.

A **REPLACE VVT SENSOR (FOR BANK 1 INTAKE SIDE)**

B

8 CHECK MIL (VVT SENSOR FOR BANK 2 INTAKE SIDE)

- (a) Disconnect the B45 VVT sensor connector.
- (b) Turn the ignition switch ON.
- (c) Check the MIL.

Result

Result	Proceed to
MIL illuminates	A
MIL does not illuminate	B

ES

(d) Reconnect the VVT sensor connector.

A **REPLACE VVT SENSOR (FOR BANK 2 INTAKE SIDE)**

B

9 CHECK MIL (VVT SENSOR FOR BANK 1 EXHAUST SIDE)

- (a) Disconnect the B54 VVT sensor connector.
- (b) Turn the ignition switch ON.
- (c) Check the MIL.

Result

Result	Proceed to
MIL illuminates	A
MIL does not illuminate	B

(d) Reconnect the VVT sensor connector.

A **REPLACE VVT SENSOR (FOR BANK 1 EXHAUST SIDE)**

B

10 CHECK MIL (VVT SENSOR FOR BANK 2 EXHAUST SIDE)

- (a) Disconnect the B40 VVT sensor connector.
- (b) Turn the ignition switch ON.
- (c) Check the MIL.

Result

Result	Proceed to
MIL illuminates	A
MIL does not illuminate	B

(d) Reconnect the VVT sensor connector.

A REPLACE VVT SENSOR (FOR BANK 2 EXHAUST SIDE)

B

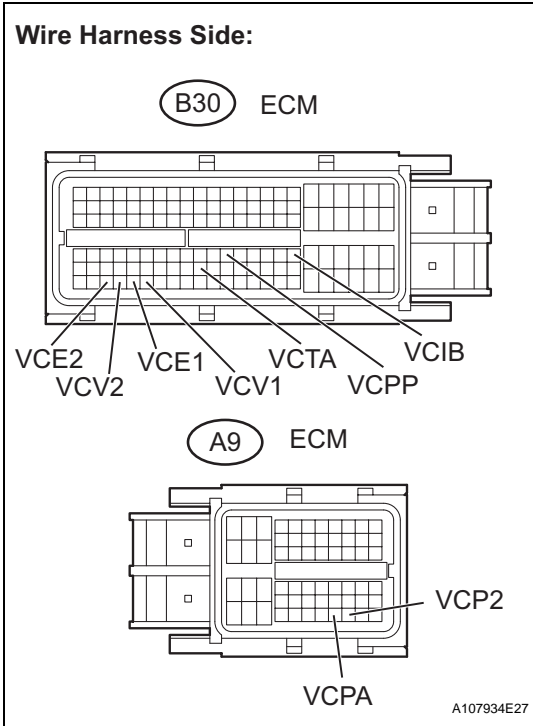
11 CHECK WIRE HARNESS

ES

- (a) Disconnect the B3 throttle body connector.
- (b) Disconnect the A4 accelerator pedal position sensor connector.
- (c) Disconnect the S3 canister pump module connector.
- (d) Disconnect the B29 battery current sensor connector.
- (e) Disconnect the B59 VVT sensor connector.
- (f) Disconnect the B45 VVT sensor connector.
- (g) Disconnect the B54 VVT sensor connector.
- (h) Disconnect the B40 VVT sensor connector.
- (i) Disconnect the A9 and B30 ECM connectors.
- (j) Measure the resistance.

Standard resistance

Tester Connection	Specified Condition
B30-96 (VCTA) - Body ground	10 kΩ or higher
A9-57 (VCPA) - Body ground	10 kΩ or higher
A9-58 (VCP2) - Body ground	10 kΩ or higher
B30-75 (VCP2) - Body ground	10 kΩ or higher
B30-80 (VCIB) - Body ground	10 kΩ or higher
B30-115 (VCV1) - Body ground	10 kΩ or higher
B30-113 (VCV2) - Body ground	10 kΩ or higher
B30-114 (VCE1) - Body ground	10 kΩ or higher
B30-112 (VCE2) - Body ground	10 kΩ or higher



- (k) Reconnect the throttle body connector.
- (l) Reconnect the accelerator pedal position sensor connector.
- (m) Reconnect the canister pump module connector.
- (n) Reconnect the battery current sensor connector.
- (o) Reconnect the VVT sensor connector.
- (p) Reconnect the ECM connectors.

NG REPAIR OR REPLACE HARNESS AND CONNECTOR

OK

REPLACE ECM