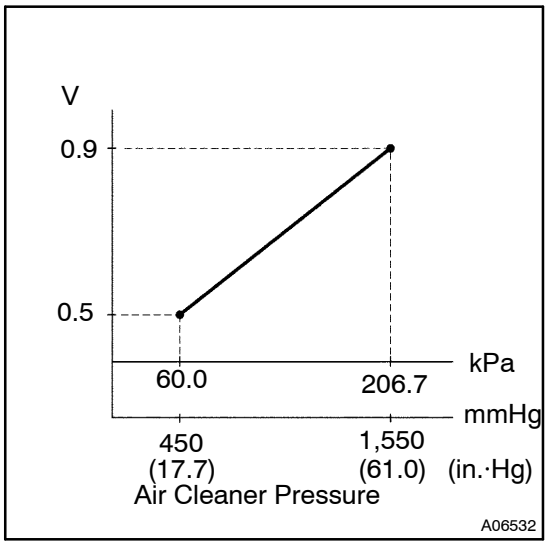
DI31Z–07

DTC	35	Intake Air Pressure Sensor Circuit Malfunction

CIRCUIT DESCRIPTION



The intake air pressure sensor is connected to the air cleaner. The engine ECU detects the air cleaner pressure as a voltage by the sensor. The engine ECU calculates the atmospheric intake air pressure by using the output voltage and uses this atomospheric value for correcting the injection volume and injection timing control.

DTC No.	DTC Detecting Condition	Trouble Area
35	Open or short in intake air pressure sensor circuit for 2 sec. or more	• Open or short in intake air pressure sensor circuit • Intake air pressure sensor • Engine ECU

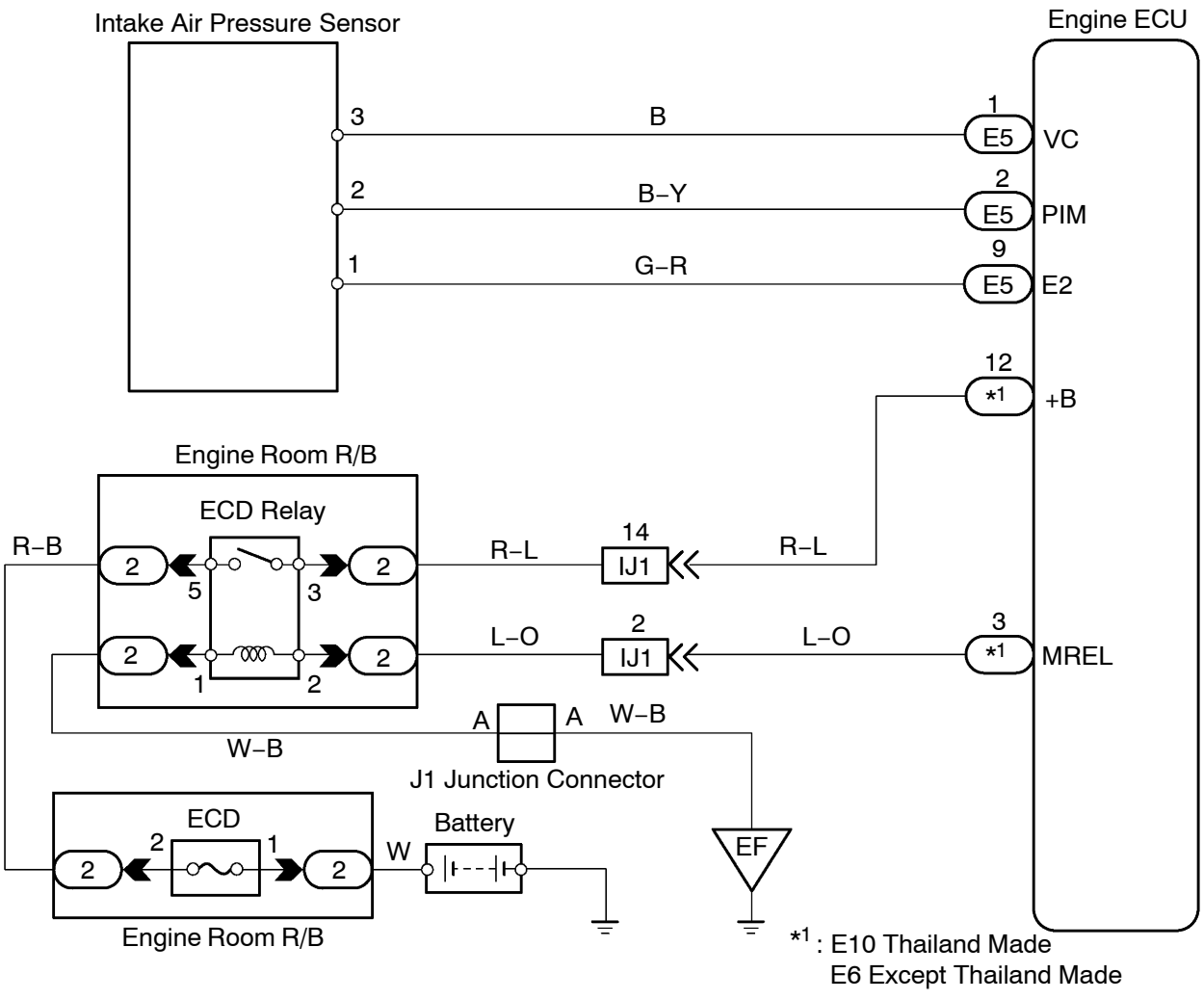
HINT:

After confirming DTC 35, use the hand–held tester to confirm the air cleaner pressure from ”CURRENT DATA”.

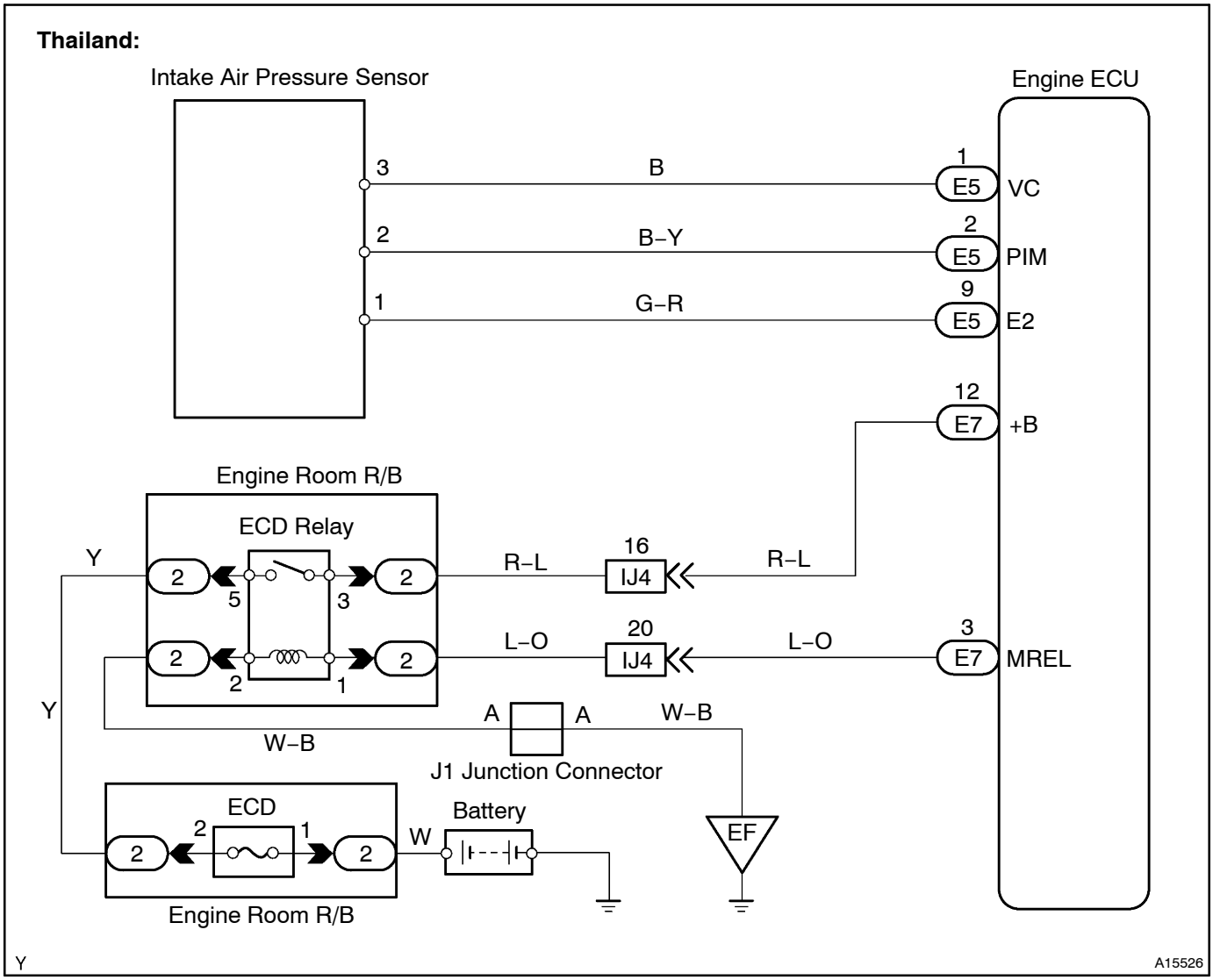
Intake manifold pressure (kPa)	Malfunction
Approx. 0	• PIM circuit short
192 or more	• VC circuit open or short • PIM circuit open • E2 circuit open

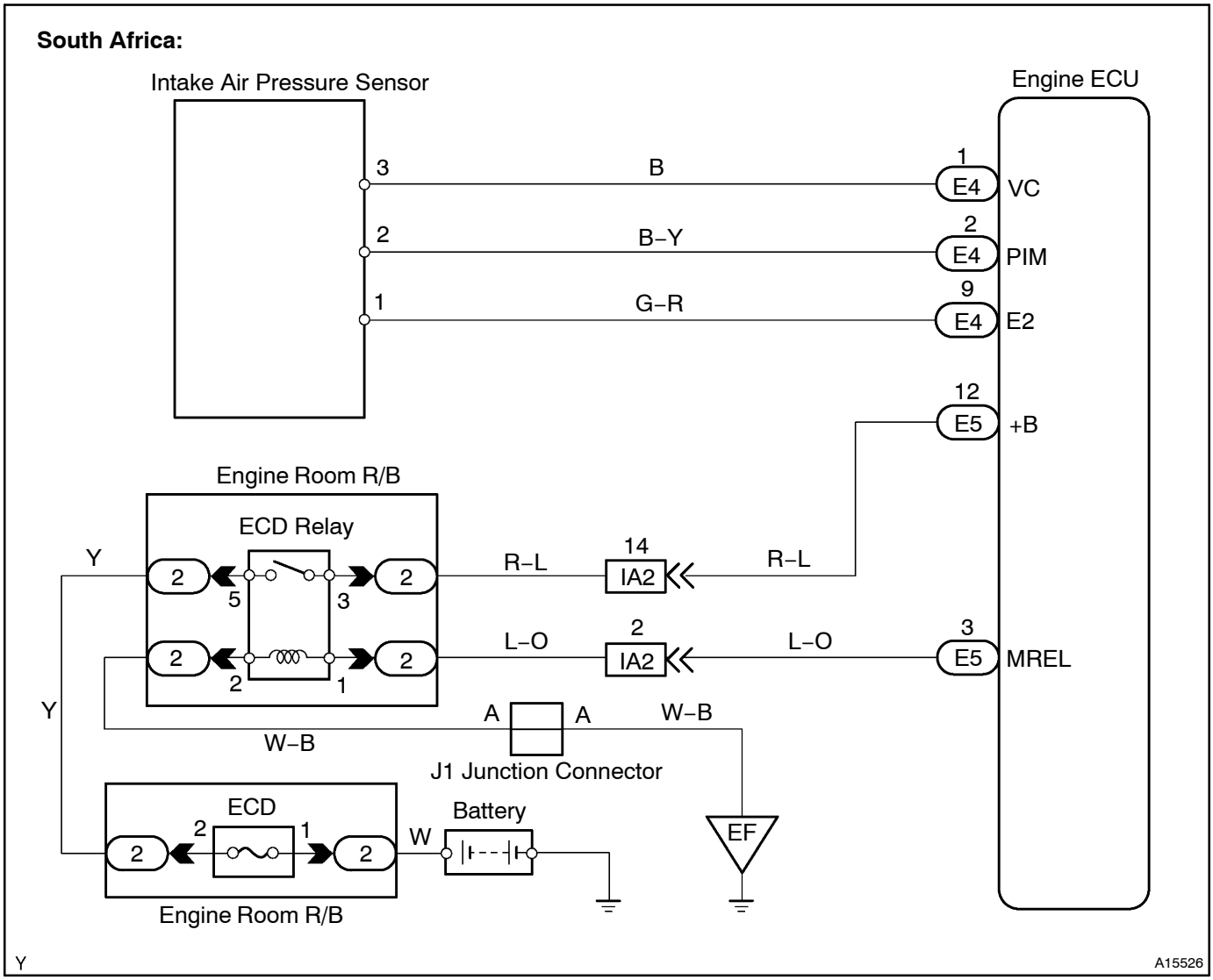
WIRING DIAGRAM

Australia:



Thailand:


Intake Air Pressure Sensor
Engine ECU
3
B
1
E5
VC
2
B–Y
2
E5
PIM
1
G–R
9
E5
E2
12
E7
+B
Engine Room R/B
ECD Relay
Y
2
5
3
2
R–L
16
IJ4
R–L
2
2
1
2
L–O
20
IJ4
L–O
3
E7
MREL
Y
W–B
A
A
W–B
J1 Junction Connector
ECD
2
1
2
2
W
Battery
EF
Engine Room R/B
Y
A15526



INSPECTION PROCEDURE

HINT:

If DTC ”22” (Water Temp. Sensor Circuit Malfunction), ”24” (Intake Air Temp, Sensor Circuit Malfunction), ”35” (Intake air Pressure Sensor Circuit Malfunction) and ”39” (Fuel Temp. Sensor Circuit Malfunction) are output simultaneously, E2 (sensor ground) may be open.

When using hand–held tester

1	**Connect the hand–held tester, and read value of air cleaner pressure.**

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.

CHECK:

Read value of air cleaner pressure on the hand–held tester.

OK:

Same as atmospheric pressure.

OK	**Repair or replace connection the vacuum hose.**

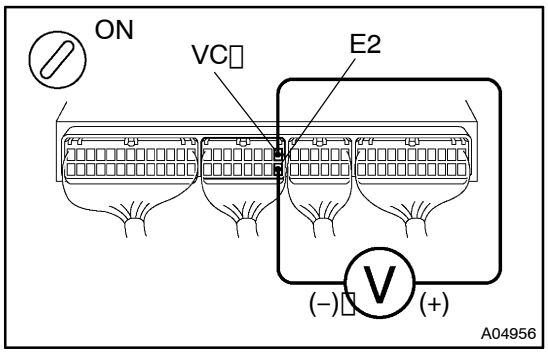
NG

2	**Check intake air pressure sensor (See page ED–15).**

NG → **Replace inatake air pressure sensor.**

OK

3	**Check voltage between terminals VC and E2 of engine ECU.**



PREPARATION:
(a) Remove the glove compartment door.
(b) Turn the ignition switch ON.

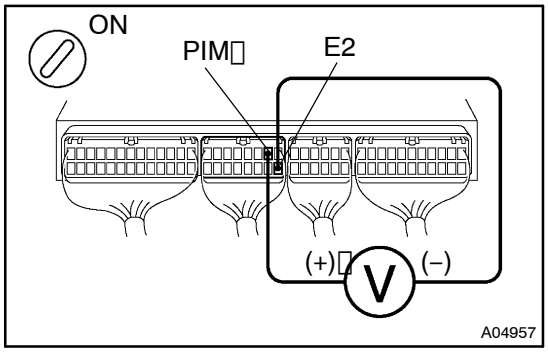
CHECK:
Measure voltage between terminals VC and E2 of engine ECU.

OK:
Voltage: 4.5 – 5.5 V

NG → **Check and replace engine ECU (See page IN–19).**

OK

4	**Check voltage between terminals PIM and E2 of engine ECU.**



PREPARATION:
(a) Remove the glove compartment door.
(b) Turn the ignition switch ON.

CHECK:
Measure voltage between terminals PIM and E2 of engine ECU.

OK:
Voltage: 1.0 – 2.2 V

OK → **Check and replace engine ECU (See page IN–19).**

NG

Check for open and short in harness and connector between engine ECU and intake air pressure sensor (See page IN–19).

OK

Replace intake air pressure sensor.

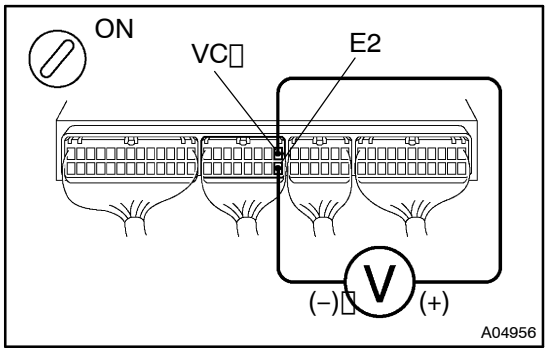
When not using hand–held tester

1	**Check intake air pressure sensor (See page ED–15).**

NG → **Replace intake air pressure sensor.**

OK

2	**Check voltage between terminals VC and E2 of engine ECU.**



PREPARATION:

(a) Remove the glove compartment door.

(b) Turn the ignition switch ON.

CHECK:

Measure voltage between terminals VC and E2 of engine ECU.

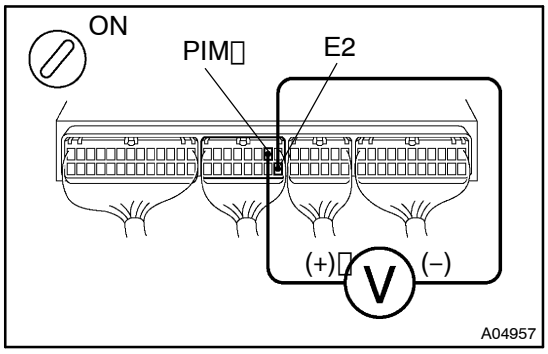
OK:

Voltage: 4.5 – 5.5 V

NG → **Check and replace engine ECU (See page IN–19).**

OK

3	Check voltage between terminals PIM and E2 of engine ECU.



PREPARATION:

(a) Remove the glove compartment door.

(b) Turn the ignition switch ON.

CHECK:

Measure voltage between terminals PIM and E2 of engine ECU.

OK:

Voltage: 1.0 – 2.2 V

OK	Check and replace engine ECU (See page IN–19).

NG

4	Check for open and short in harness and connector between engine ECU and intake air pressure sensor (See page IN–19).

NG	Repair or replace harness or connector.

OK

Replace for intake air pressure sensor.