

DTC	19 (2)	Accelerator Pedal Position Sensor Circuit Malfunction (IDL Switch/Range Malfunction)
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CIRCUIT DESCRIPTION

Refer to DTC 19 (1) (Accelerator Pedal Position Sensor Circuit Malfunction (Open/Short)) on [page DI-27](#).

DTC No.	DTC Detecting Condition	Trouble Area
19(2)	Condition (a) or (b) continue 0.5 sec. or more: (a) IDL ON and VA > 1.4 V (b) IDL ON and VAS > 1.4 V	• Open or short in accelerator pedal position sensor circuit • Accelerator pedal position sensor • Engine ECU
	Condition (a) or (b) continue 0.5 sec. or more: (a) IDL OFF and VA < 0.6 V (b) IDL OFF and VAS < 0.6 V	
	Conditions (a) and (b) continue 0.05 sec. or more: (a) 0.6 V < VA < 4.4 V and 0.6 V < VAS < 4.4 V (b) VA – VAS > 0.5 V	

WIRING DIAGRAM

Refer to DTC 19 (1) (Accelerator Pedal Position Sensor Circuit Malfunction (Open/Short)) on [page DI-27](#).

INSPECTION PROCEDURE

When using hand-held tester

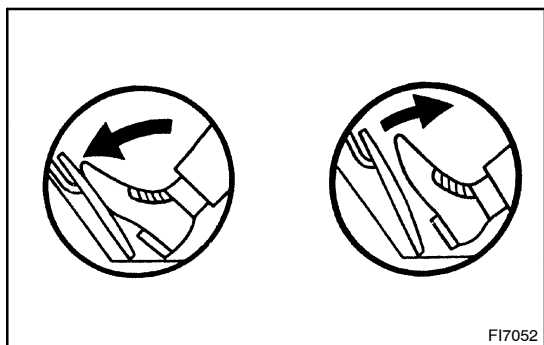
1	Connect the hand-held tester, read the IDL signal.
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PREPARATION:

- Connect the hand-held tester to the DLC3.
- Turn the ignition switch ON and push the hand-held tester main switch ON.

CHECK:

Read the IDL signal.



OK:

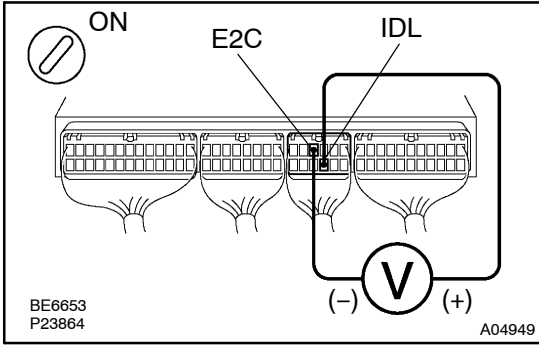
Accelerator pedal	IDL signal
Fully open	OFF
Fully closed	ON

OK

Go to step 4.

NG

2 Check voltage between terminals IDL and E2C of engine ECU.



PREPARATION:

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

CHECK:

Measure voltage between terminals IDL and E2C of engine ECU.

OK:

Accelerator pedal	Voltage
Fully closed	9 – 14 V
Fully open	0 – 3 V

OK

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

NG

3 Check for open and short in harness and connector between engine ECU and accelerator pedal position sensor (IDL line) (See page IN-19).

NG

Repair harness or connector.

OK

Replace accelerator pedal position sensor.

4 Connect the hand-held tester, read the accelerator pedal operating percentage (See page DI-27 , Step 1).

OK

Check for intermittent problems
(See page DI-4).

OK

- 5** Check voltage between terminal VCC of wire harness side connector and body ground ([See page DI-27](#), Step 2).

NG

Go to step 8.

OK

- 6** Check voltage between terminals VA, VAS and E2C of engine ECU ([See page DI-27](#), Step 3).

OK

Check and replace engine ECU ([See page IN-19](#)).

NG

- 7** Check for open and short in harness and connector between engine ECU and accelerator pedal position sensor (VA, VAS line) ([See page IN-19](#)).

NG

Repair harness or connector.

OK

Replace accelerator pedal position sensor.

- 8** Check voltage between terminals VCC and E2C of engine ECU ([See page DI-27](#), Step 5).

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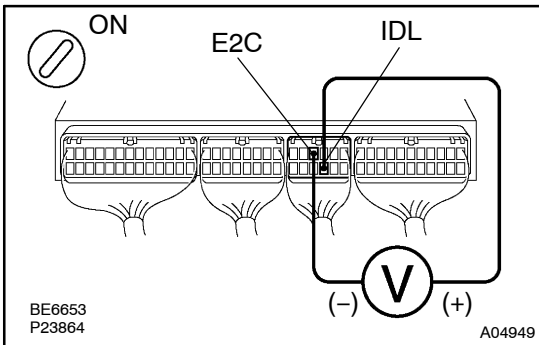
Check and replace engine ECU ([See page IN-19](#)).

OK

Check for open in harness and connector between engine ECU and accelerator pedal position sensor (VCC line) ([See page IN-19](#)).

When not using hand-held tester

1 Check voltage between terminals IDL and E2C of engine ECU.



PREPARATION:

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

CHECK:

Measure voltage between terminals IDL and E2C of engine ECU.

OK:

Accelerator pedal	Voltage
Fully closed	9 – 14 V
Fully open	0 – 3 V

OK

Go to step 3.

NG

2 Check for open and short in harness and connector between engine ECU and accelerator pedal position sensor (IDL line) (See page IN-19).

NG

Repair harness or connector.

OK

Replace accelerator pedal position sensor.

3 Check voltage between terminal 4 of wire harness side connector and body-ground (See page DI-27, Step 2).

NG

Go to step 6.

OK

- | | |
|----------|---|
| 4 | Check voltage between terminals VA, VAS and E2C of engine ECU
(See page DI-27 , Step 3). |
|----------|---|

OK

Check and replace engine ECU
([See page IN-19](#)).

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- | | |
|----------|--|
| 5 | Check for open and short in harness and connector between engine ECU and accelerator pedal position sensor (VA, VAS line) (See page IN-19). |
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NG

Repair harness or connector.

OK

Replace accelerator pedal position sensor.

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|----------|---|
| 6 | Check voltage between terminals VCC and E2C of engine ECU
(See page DI-27 , Step 5). |
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NG

Check and replace engine ECU
([See page IN-19](#)).

OK

Check for open in harness and connector between engine ECU and accelerator pedal position sensor (VCC line) ([See page IN-19](#)).