

<b>DTC</b>	<b>19 (2)</b>	<b>Accelerator Pedal Position Sensor Circuit Malfunction (IDL Switch/Range Malfunction)</b>
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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	<ul style="list-style-type: none"> <li>• Open or short in accelerator pedal position sensor circuit</li> <li>• Accelerator pedal position sensor</li> <li>• Engine ECU</li> </ul>
	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

<b>1</b>	<b>Connect the hand –held tester, read the IDL signal.</b>
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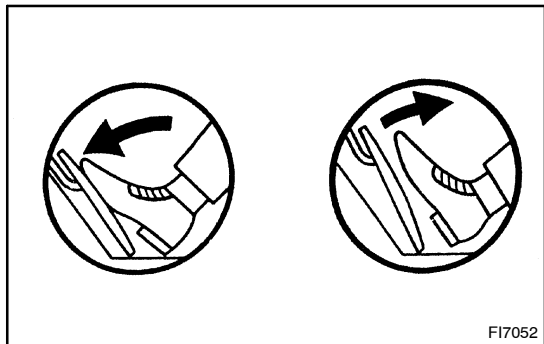
#### PREPARATION:

(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 the IDL signal.



#### OK:

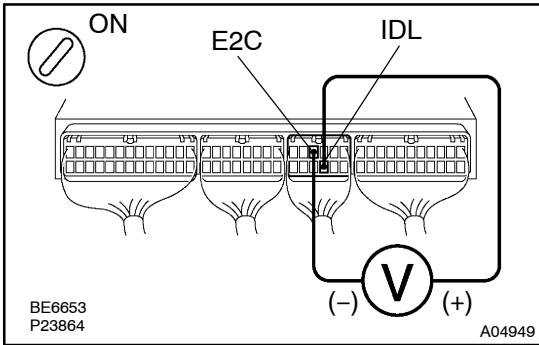
Accelerator pedal	IDL signal
Fully open	OFF
Fully closed	ON

**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).

NG

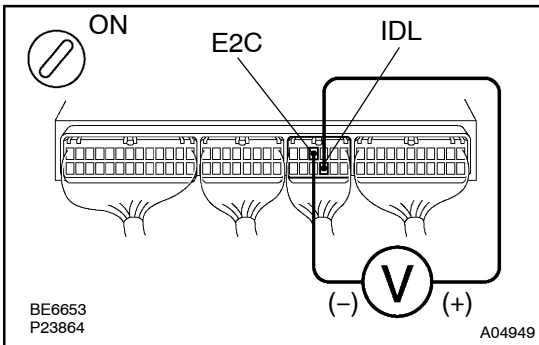
Check and replace engine ECU ([See page IN-19](#)).

OK

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

## 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).

NG

- |   |   |
|---|---|
| 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). |
|---|---|

NG

Repair harness or connector.

OK

Replace accelerator pedal position sensor.

- |   |   |
|---|---|
| 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).