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| <b>DTC</b> | <b>P1126</b> | <b>Magnetic Clutch Circuit Malfunction</b> |
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## CIRCUIT DESCRIPTION

Magnetic clutch is mounted between the throttle motor and the valve, and it connects the throttle motor with the throttle valve.

Therefore, the throttle motor opens and closes the throttle valve through the magnetic clutch.

If the electric throttle control system has a malfunction, the magnetic clutch separates the throttle motor from the throttle valve in order not to operate the throttle valve by the throttle motor.

If this DTC is stored, the ECM shuts down the power for the throttle motor and the magnetic clutch, and the throttle valve is fully closed by the return spring.

However, the opening angle of the throttle valve can be controlled by the accelerator pedal through the throttle cable.

| DTC No. | DTC Detecting Condition                                                                              | Trouble Area                                                                                                                           |
|---------|------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| P1126   | Condition (a) continues for 0.8 seconds:<br>(a) Magnetic clutch current $\geq 1.4$ A or $\leq 0.4$ A | <ul style="list-style-type: none"> <li>• Open or short in magnetic clutch circuit</li> <li>• Magnetic clutch</li> <li>• ECM</li> </ul> |
|         | Condition (a) continues for 1.5 seconds:<br>(a) Magnetic clutch current $\geq 1.0$ A or $\leq 0.8$ A |                                                                                                                                        |

## WIRING DIAGRAM

Refer to DTC P1125 on page [DI-109](#).

## INSPECTION PROCEDURE

### HINT:

Read freeze frame data using TOYOTA hand-held tester or OBD II scan tool. Because freeze frame records the engine conditions when the 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.

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| <b>1</b> | <b>Check magnetic clutch circuit.</b> |
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**When using TOYOTA hand-held tester:**

### PREPARATION:

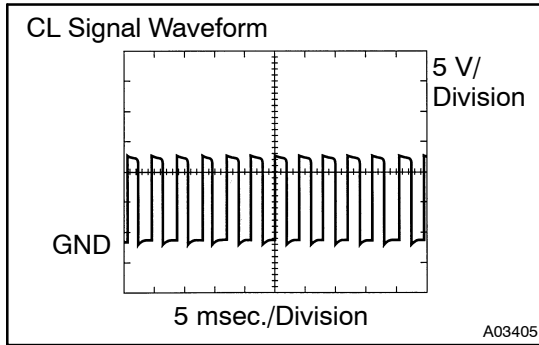
- Connect the TOYOTA hand-held tester to the DLC3.
- Turn the ignition switch ON and push the TOYOTA hand-held tester main switch ON.

### CHECK:

Read the magnetic clutch current value on the TOYOTA hand-held tester.

### OK:

**Current: 0.8 – 1.0 A**



**When not using TOYOTA hand-held tester:**

**PREPARATION:**

- (a) Connect the oscilloscope between terminals CL+ and CL- of the ECM connector.
- (b) Start the engine.

**CHECK:**

Check the waveform between terminals CL+ and CL- of the ECM connector when the engine is idling.

**OK:**

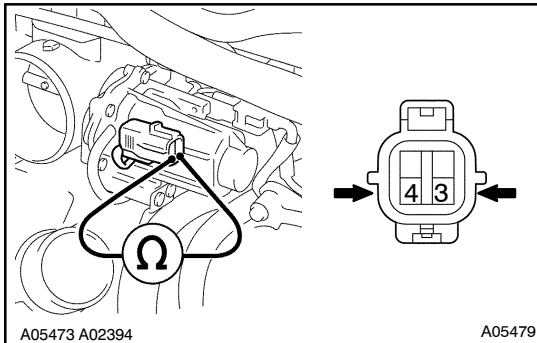
The correct waveform is as shown.

NG

Go to step 4.

OK

**2 Check magnetic clutch.**



**PREPARATION:**

Disconnect the throttle control motor with the magnetic clutch connector.

**CHECK:**

Measure the resistance between terminals 3 and 4 of the throttle control motor with the magnetic clutch.

**OK:**

Resistance: 4.2 – 5.2  $\Omega$  at 20°C (68°F)

NG

Replace throttle control motor with magnetic clutch (See page [SF-40](#)).

OK

**3 Check for open and short in harness and connector between magnetic clutch and ECM (See page [IN-34](#)).**

NG

Repair or replace.

OK

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| <b>4</b> | <b>Check operation of magnetic clutch.</b> |
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**CHECK:**

- (a) Clear the DTC.
- (b) Perform the following steps and check the DTC.
  - (1) Turn the ignition switch ON.
  - (2) Start the engine.
  - (3) Turn the ignition switch OFF and wait 3 seconds.
  - (4) Turn the ignition switch ON.

**OK:**

**DTC P1126 is not stored.**

**NG**

**Replace throttle control motor with magnetic clutch (See page [SF-40](#)).**

**OK**

**Check and replace ECM (See page [IN-34](#)).**