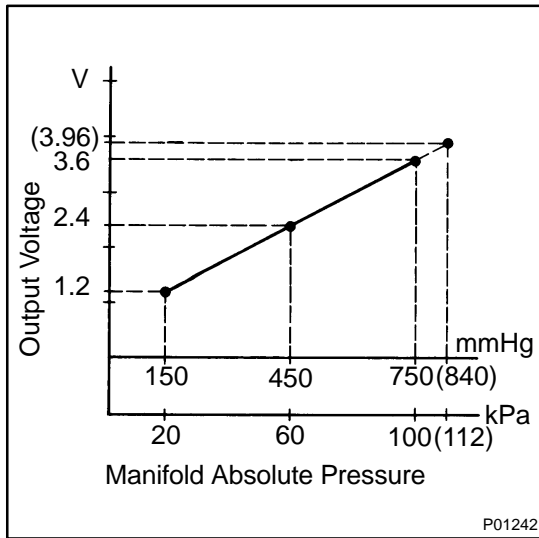


# CIRCUIT INSPECTION

<b>DTC</b>	<b>P0105</b>	<b>Manifold Absolute Pressure/Barometric Pressure Circuit Malfunction</b>
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## CIRCUIT DESCRIPTION



By a built-in sensor unit, the manifold absolute pressure sensor detects the intake manifold pressure as a voltage. The ECM then determines the basic injection duration and basic injection advance angle based on this voltage. Since the manifold absolute pressure sensor does not use the atmospheric pressure as a criterion, but senses the absolute pressure inside the intake manifold (the pressure in proportion to the present absolute vacuum 0), it is not influenced by fluctuations in the atmospheric pressure due to high altitude and other factors. This permits it to control the air-fuel ratio at the proper level under all conditions.

DTC No.	DTC Detecting Condition	Trouble Area
P0105	Open or short manifold absolute pressure sensor circuit	<ul style="list-style-type: none"> <li>• Open or short in manifold absolute pressure sensor circuit</li> <li>• Manifold absolute pressure sensor</li> <li>• ECM</li> </ul>

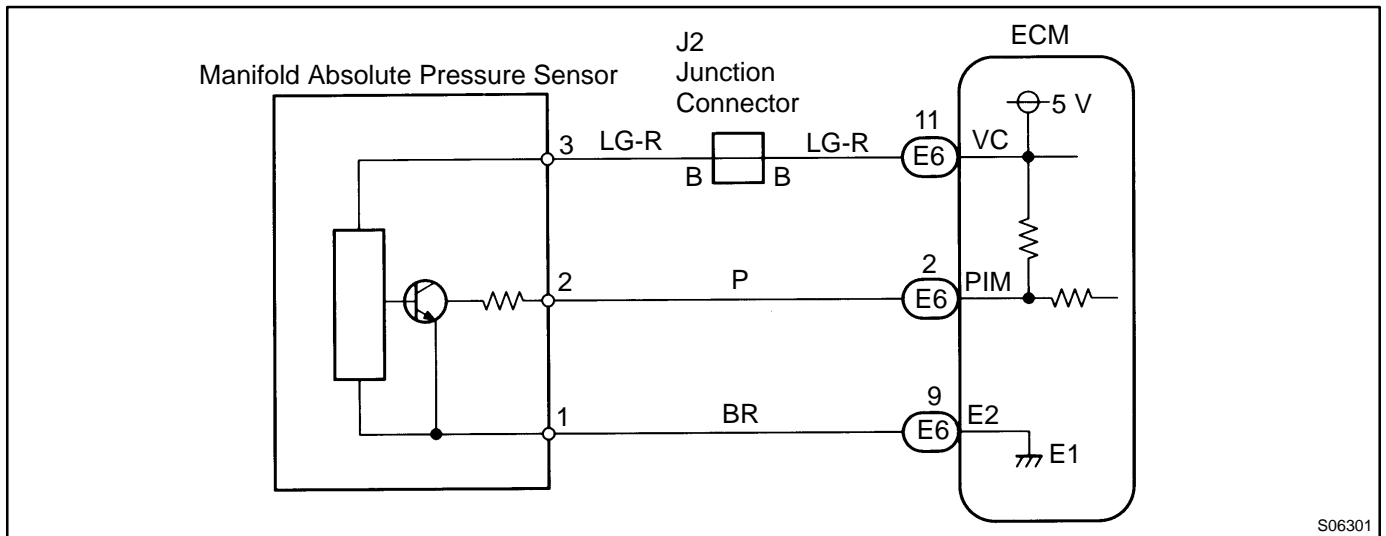
If the ECM detects DTC "P0105" it operates the fail-safe function, keeping the ignition timing and injection volume constant and making it possible to drive the vehicle.

**HINT:**

After confirming DTC P0105 use the OBDII scan tool or TOYOTA hand-held tester to confirm the manifold absolute pressure from "CURRENT DATA".

Manifold absolute pressure	Trouble Area
0 kPa	PIM circuit short
130 kPa or more	VC circuit open or short PIM circuit open E2 circuit open

## WIRING DIAGRAM



S06301

## INSPECTION PROCEDURE

### HINT:

If DTC "P0105" (Manifold Absolute Pressure/Barometric Pressure Circuit Malfunction), "P0110" (Intake Air Temp. Circuit Malfunction), "P0115" (Engine Coolant Temp. Circuit Malfunction), "P0120" (Throttle/Pedal Position Sensor/Switch "A" Circuit Malfunction) are output simultaneously, E2 (sensor ground) may be open.

<b>1</b>	<b>Connect OBD II scan tool or TOYOTA hand-held tester, and read value of manifold absolute pressure.</b>
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### PREPARATION:

- Remove the fuse cover on the instrument panel.
- Connect the OBD II scan tool or TOYOTA hand-held tester to the DLC3.
- Turn the ignition switch ON and OBDII scan tool or TOYOTA hand-held tester main switch ON.

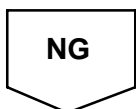
### CHECK:

Read value of manifold absolute pressure on the OBD II scan tool or TOYOTA hand-held tester.

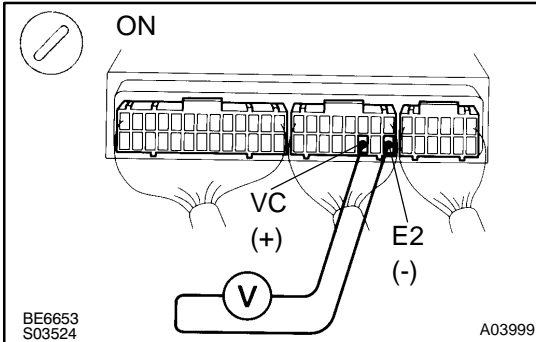
### OK:

**Same as atmospheric pressure**

<b>OK</b>	<b>Check for intermittent problems (See page DI-3).</b>
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## 2 Check voltage between terminals VC and E2 of ECM connector.



### PREPARATION:

- Remove the lower finish panel.
- Turn ignition switch ON.

### CHECK:

Measure voltage between terminals VC and E2 of ECM connector.

### OK:

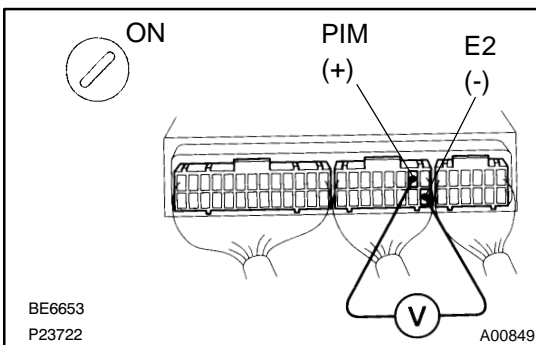
**Voltage: 4.5 - 5.5 V**

**NG**

**Check and replace ECM (See page IN-27 ).**

**OK**

## 3 Check voltage between terminals PIM and E2 of ECM connector.



### PREPARATION:

- Remove the lower finish panel.
- Turn ignition switch ON.

### CHECK:

Measure voltage between terminals PIM and E2 of ECM connector.

### OK:

**Voltage: 3.3 - 3.9 V**

**OK**

**Check and replace ECM (See page IN-27 ).**

**NG**

## 4 Check for open and short in harness and connector between manifold absolute pressure sensor and ECM.

**NG**

**Repair or replace harness or connector.**

**OK**

**Replace manifold absolute pressure sensor.**

1997 TERCEL (RM498U)