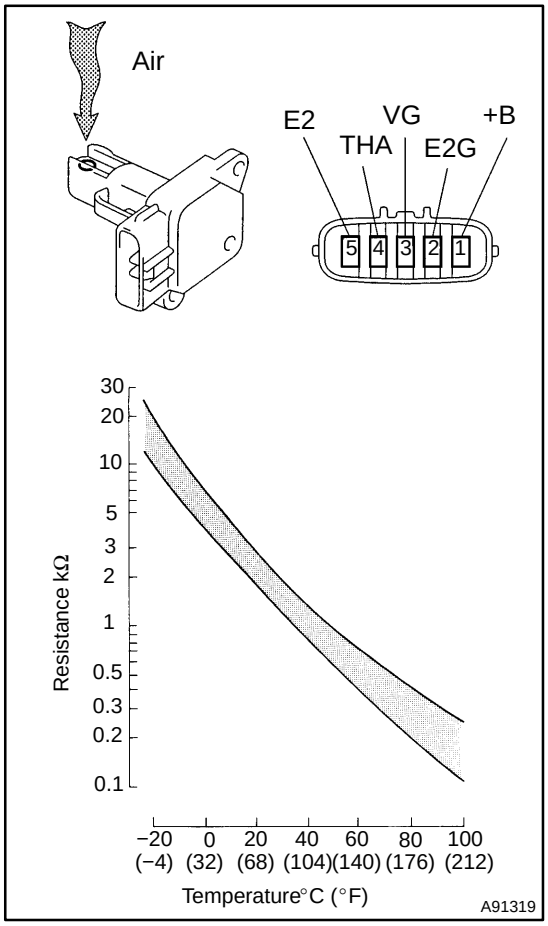
100JZ−02

# INSPECTION




**1. INSPECT MASS AIR FLOW METER**

(a) Check the output voltage.

(1) Apply battery voltage across terminals 1 (+B) and 2 (E2G).

(2) Using a voltmeter, connect the positive (+) tester probe to terminal VG, and negative (−) tester probe to terminal E2G.

(3) Blow air into the MAF meter, and check that the voltage fluctuates.

(b) Measure the resistance between terminals 4 (THA) and 5 (E2).

**Standard:**

| Condition | Specified Condition |
|---|---|
| −20°C (−4°F) | 13.6 to 18.4 kΩ |
| 20°C (68°F) | 2.21 to 2.69 kΩ |
| 60°C (140°F) | 0.493 to 0.667 kΩ |

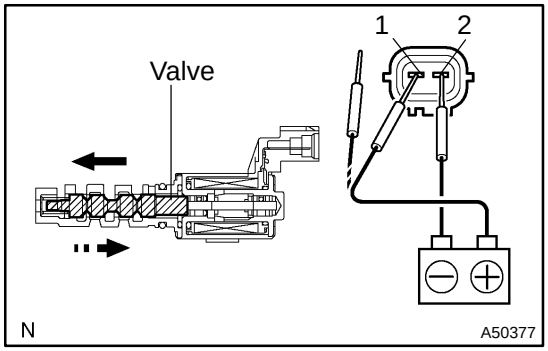
If the result is not as specified, replace the MAF meter.

**2. INSPECT CAMSHAFT TIMING OIL CONTROL VALVE ASSY**

(a) Measure the resistance between the terminals.

**Standard: 6.9 to 7.9 Ω at 20°C (68°F)**

If the result is not as specified, replace the OCV assy.




(b) Connect the battery's positive (+) lead to terminal 1 and negative (−) lead to terminal 2, and check the movement of the valve.

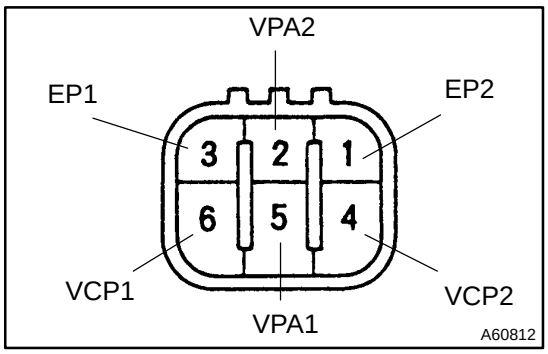
**NOTICE:**

**Confirm that the valve moves freely and does not become stuck in any position.**

If necessary, replace the OCV assy.

HINT:

If the valve cannot return properly because of foreign matter, a small pressure leak in the advanced direction may occur and a DTC will be output.



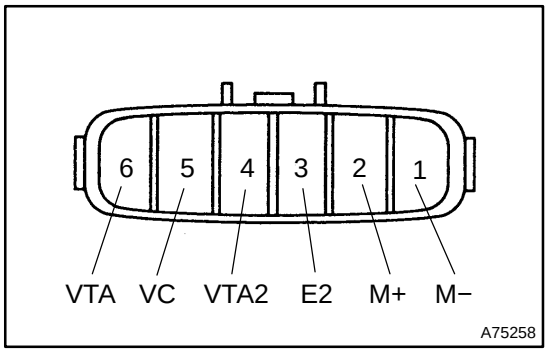

### 3. INSPECT ACCELERATOR PEDAL ASSY

(a) Measure the resistance between the terminals.

**Standard:**

| Tester Connection | Specified Condition |
|---|---|
| 2 (VPA2) − 3 (EP1) | 5.0 kΩ or less |
| 5 (VPA1) − 1 (EP2) | 5.0 kΩ or less |
| 6 (VCP1) − 3 (EP1) | 2.25 to 4.75 kΩ |
| 4 (VCP2) − 1 (EP2) | 2.25 to 4.75 kΩ |

If the result is not as specified, replace the pedal assy.



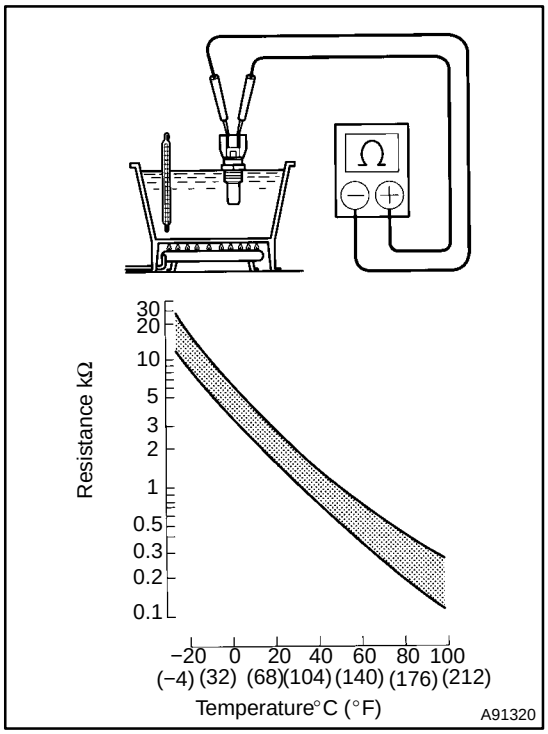

### 4. INSPECT THROTTLE BODY ASSY

(a) Measure the resistance between the terminals.

**Standard:**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| 2 (M+) − 1 (M−) | 20°C (68°F) | 0.3 to 100 Ω |
| 5 (VC) − 3 (E2) | 20°C (68°F) | 2.0 to 4.0 kΩ |

If the result is not as specified, replace the throttle body assy.




### 5. INSPECT ENGINE COOLANT TEMPERATURE SENSOR

(a) Measure the resistance between each terminal.

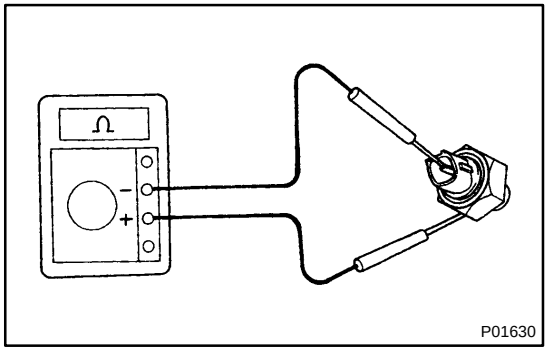
**Standard:**

| Condition | Specified Condition |
|---|---|
| Approx. 20°C (68°F) | 2.32 to 2.59 kΩ |
| Approx. 80°C (176°F) | 0.310 to 0.326 kΩ |

If the result is not as specified, replace the sensor.

**NOTICE:**

**If checking the engine coolant temperature sensor in the water, keep the terminals dry. After the check, wipe the sensor dry.**



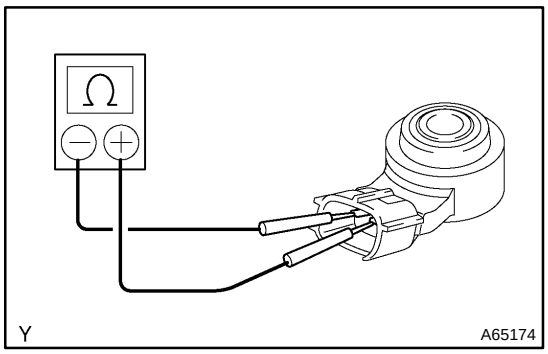

### 6. INSPECT KNOCK SENSOR (1MZ−FE ENGINE TYPE)

(a) Using an ohmmeter, measure the resistance between the terminal and body.

**Standard: 10 kΩ or higher**

HINT:

If the result is not as specified, replace the sensor.



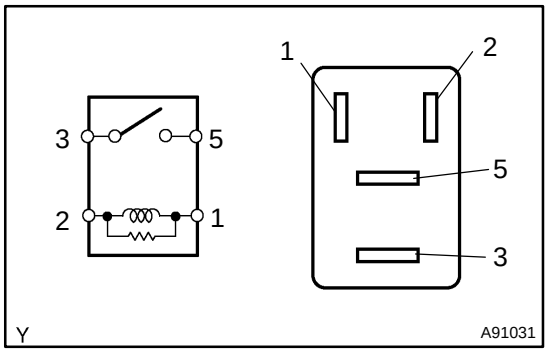

**7. INSPECT KNOCK SENSOR (3MZ−FE ENGINE TYPE)**

(a) Using an ohmmeter, measure the resistance between the terminals.

**Standard: 120 to 280 kΩ at 20°C (68°F)**

HINT:

If the result is not as specified, replace the sensor.




**8. INSPECT RELAY (Marking: EFI, C/OPN)**

(a) Using an ohmmeter, measure the resistance of the relay.

**Standard:**

| Tester Connection | Specified Condition |
|---|---|
| 3 − 5 | 10 kΩ or higher |
| 3 − 5 | Below 1Ω<br>(when battery voltage is applied to terminals 1 and 2) |

If the result is not as specified, replace the relay.