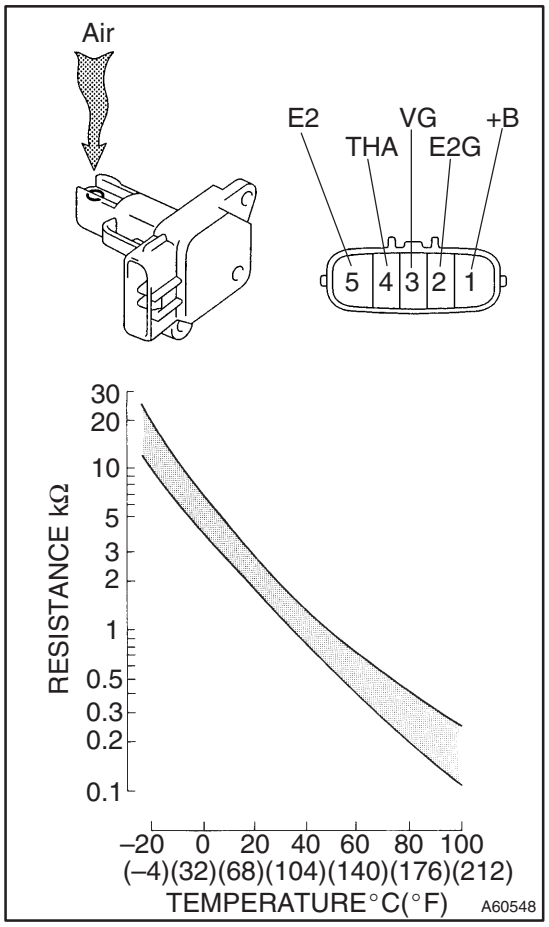
INSPECTION



1. MASS AIR FLOW METER

(a) Output voltage inspection.

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

(2) Using a voltmeter, connect the positive (+) tester probe to terminal 3 (VG), and negative (–) tester probe to terminal 2 (E2G).

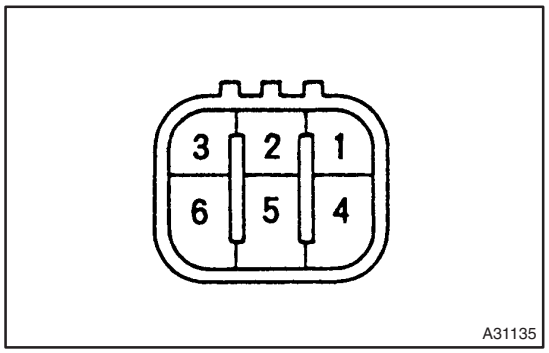
(3) Blow air into the MAF meter, and check that the voltage fluctuates.

(b) Resistance inspection.

(1) Using an ohmmeter, measure the resistance between terminals 4 (THA) and 5 (E2).

Resistance:

13.6 to 18.4 kΩ at –20°C (–4°F)
2.21 to 2.69 kΩ at 20°C (68°F)
0.49 to 0.67 kΩ at 60°C (140°F)



2. DIESEL THROTTLE BODY ASSY

(a) Resistance inspection. (Throttle control motor)

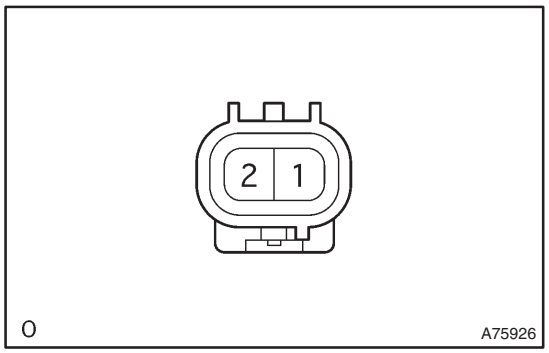
(1) Using an ohmmeter, measure the resistance between each terminal.

Resistance:

Terminals	Temperature	Resistance
2 – 1, 3	Cold	16 to 22 Ω
	Hot	22 to 28 Ω
5 – 4, 6	Cold	16 to 22 Ω
	Hot	22 to 28 Ω

NOTICE:

"Cold" and "Hot" in the following sentence express the temperature of the sensor itself. "Cold" is from –10°C (14°F) to 50°C (122°F) and "Hot" is from 50°C (122°F) to 100°C (212°F).

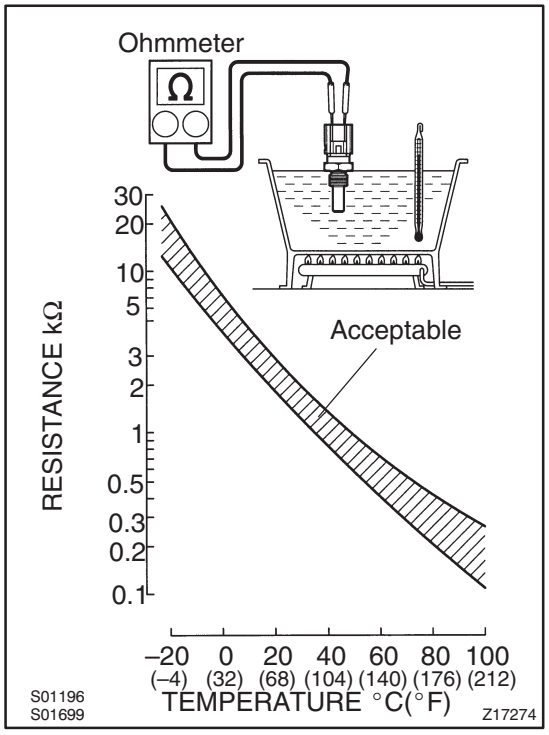


(b) Continuity inspection. (Throttle valve SW)

(1) Using an ohmmeter, check that there is continuity between each terminal.

Specified condition:

Throttle valve	Specified condition
Fully open	Continuity
Fully close	No continuity



3. ENGINE COOLANT TEMPERATURE SENSOR

(a) Resistance inspection.

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

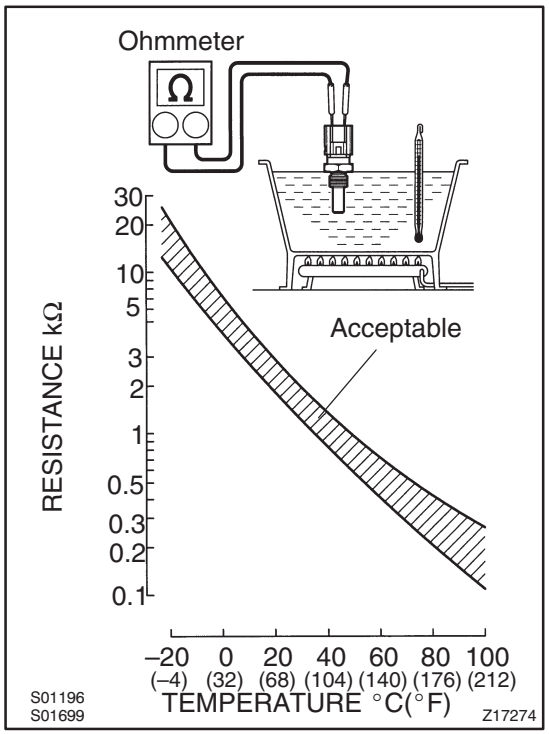
Resistance:

2.31 to 2.59 kΩ at 20°C (68°F)

0.310 to 0.326 kΩ at 80°C (176°F)

NOTICE:

In case of checking the water temperature sensor in the water, be careful not to allow water to go into the terminals, and after checking, wipe out the sensor.



4. DIESEL TURBO INLET AIR TENPERATURE SENSOR

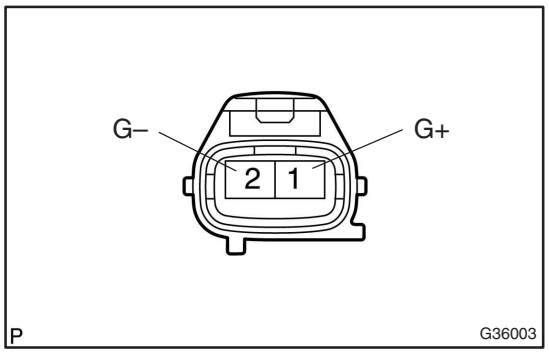
(a) Resistance inspection.

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

Resistance: 2.21 to 2.65 kΩ at 20°C (68°F)

NOTICE:

In case of checking the water temperature sensor in the water, be careful not to allow water to go into the terminals, and after checking, wipe out the sensor.



5. CRANK POSITION SENSOR

(a) Resistance inspection.

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

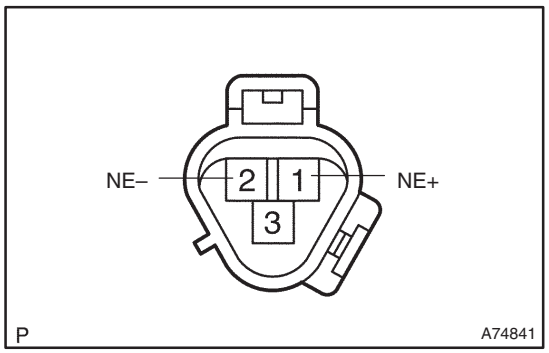
Resistance:

835 to 1400 Ω at cold

1060 to 1645 Ω at hot

NOTICE:

"Cold" and "Hot" in the following sentence express the temperature of the sensor itself. "Cold" is from –10°C (14°F) to 50°C (122°F) and "Hot" is from 50°C (122°F) to 100°C (212°F).



6. CRANK POSITION NO.2 SENSOR

(a) Resistance inspection.

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

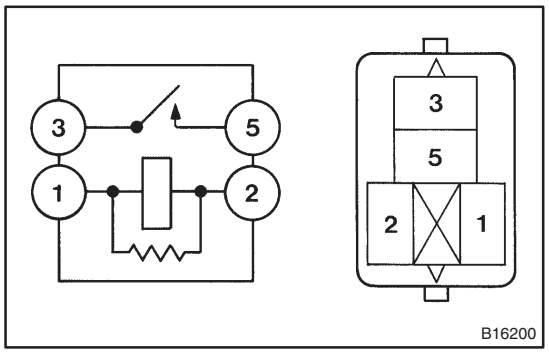
Resistance:

1630 to 2740 Ω at cold

2065 to 3225 Ω at hot

NOTICE:

"Cold" and "Hot" in the following sentence express the temperature of the sensor itself. "Cold" is from –10°C (14°F) to 50°C (122°F) and "Hot" is from 50°C (122°F) to 100°C (212°F).



7. DIESEL TURBO MAIN RELAY

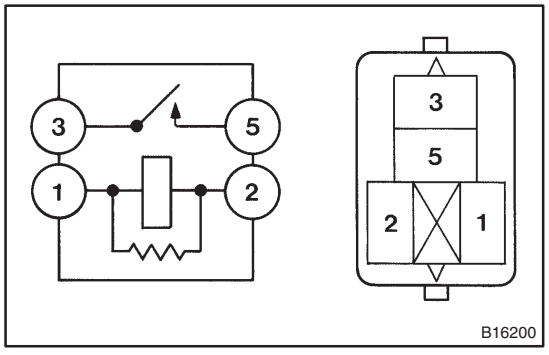
(a) Resistance inspection.

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

Standard:

Tester Connection	Specified Condition
3 – 5	10 kΩ or higher
3 – 5	Below 1 Ω (Apply battery voltage to terminals 1 and 2)

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



8. DIESEL ECU RELAY

(a) Resistance inspection.

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

Standard:

Tester Connection	Specified Condition
3 – 5	10 kΩ or higher
3 – 5	Below 1 Ω (Apply battery voltage to terminals 1 and 2)

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