

# THROTTLE POSITION (TP) SENSOR INSPECTION

BHE014018910W01

## Caution

• This inspection procedure cannot be completed correctly if the accelerator pedal position sensor has a malfunction. Before performing this procedure, verify that any one of the DTCs (P1577, P2122, P2123, P2127, P2128, P2138) related to the accelerator pedal position sensor is not detected.

## Note

• Before performing the following inspection, make sure to follow the troubleshooting flowchart. (See [Troubleshooting Procedure](#).)

## Voltage Inspection

1. Turn the ignition switch to the ON position.
2. Verify that the voltage at PCM terminals 1J (WDS PID: TP1) and 1M (WDS PID: TP2) increases while gradually increasing the accelerator pedal opening angle according to the accelerator pedal opening angle.
  - If it can be verified, go to the next step.
  - If it cannot be verified even though the related wiring harnesses have no malfunction, replace the throttle body. (See [INTAKE-AIR SYSTEM REMOVAL/INSTALLATION](#).)
3. Verify that the voltage at PCM terminals 1J (WDS PID: TP1) and 1M (WDS PID: TP2) is as indicated in the table.
  - If it cannot be verified, replace the throttle body. (See [INTAKE-AIR SYSTEM REMOVAL/INSTALLATION](#).)

### TP sensor output voltage

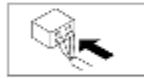
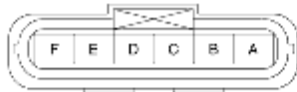
Measurement condition	PCM terminal (WDS PID)	
	1J (TP1)	1M (TP2)
When the accelerator pedal is depressed.	3.825-4.095 V	4.033-4.303 V
When the accelerator pedal is released.	0.4-0.8 V	1.18-1.78 V

## Circuit Open/Short Inspection

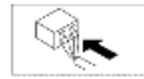
1. Disconnect the PCM connector.
2. Disconnect the throttle body connector.
3. Inspect the following wiring harnesses for open or short circuit. (Continuity inspection)



THROTTLE BODY  
WIRING HARNESS-SIDE CONNECTOR



PCM  
WIRING HARNESS-SIDE CONNECTOR



CHU0140W161

### Open circuit

- If there is no continuity in the following wiring harnesses, there is an open circuit. Repair or replace the wiring harness.
  - Throttle body terminal C and PCM terminal 2F
  - Throttle body terminal D and PCM terminal 1M
  - Throttle body terminal E and PCM terminal 1Q
  - Throttle body terminal F and PCM terminal 1J

### Short circuit

- If there is continuity in the following wiring harnesses, there is a short circuit. Repair or replace the wiring harness.
  - Throttle body terminal E and body ground
  - Throttle body terminal E and power supply
  - Throttle body terminal F and body ground
- Throttle body terminal F and power supply
- Throttle body terminal D and body ground
- Throttle body terminal D and power supply