

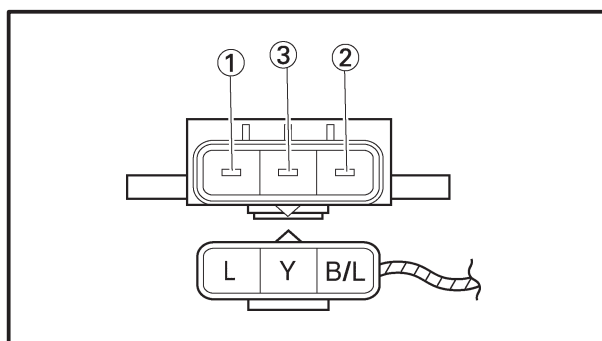


EAS00502

CHECKING AND ADJUSTING THE THROTTLE POSITION SENSOR

NOTE:

Before adjusting the throttle position sensor, the engine idling speed should be properly adjusted.



1. Check:

- throttle position sensor (installed on the throttle body)



- Disconnect the throttle position sensor coupler from the throttle position sensor.
- Connect the pocket tester ($\Omega \times 1k$) to the throttle position sensor.

Tester positive probe → blue terminal ①

Tester negative probe → black/blue terminal ②

- Measure the maximum throttle position sensor resistance.
Out of specification → Replace the throttle position sensor.



Maximum throttle position sensor resistance

**4.0 ~ 6.0 k Ω at 20°C
(blue – black/blue)**

- Connect the pocket tester ($\Omega \times 1k$) to the throttle position sensor.

Tester positive probe → yellow terminal ③

Tester negative probe → black/blue terminal ②

- While slowly opening the throttle, check that the throttle position sensor resistance is within the specified range.

NOTE:

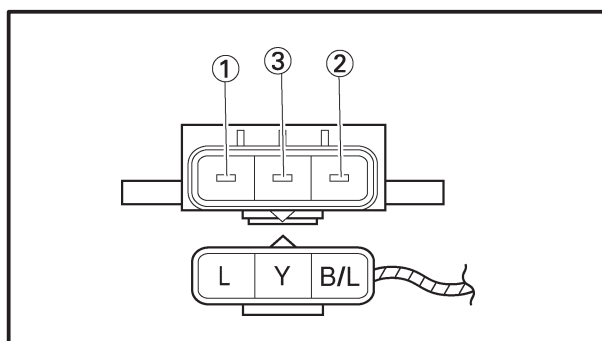
Check mainly that the resistance changes gradually when turning the throttle, since the readings (from closed to wide-open throttle) may differ slightly from those specified.

Out of specification or the resistance changes abruptly → Go to step 2 below.



Throttle position sensor resistance

**(520 ~ 900 Ω) ~ (4.0 ~ 6.0 kΩ)
at 20°C
(yellow – black/blue)**



2. Check:

- throttle position sensor angle

- Connect the throttle position sensor coupler to the throttle position sensor.
- Connect the pocket tester (DC 20 V) to the throttle position sensor coupler.

Tester positive probe → blue terminal ①

Tester negative probe → black/blue terminal ②

- c. Measure the throttle position sensor output voltage.

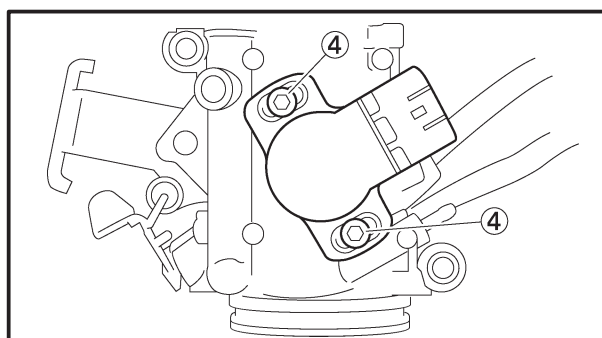


Throttle position sensor output voltage

4.95 ~ 5.05 V

Out of specification

- Check the throttle sensor coupler connection.
- Check the entire fuel injection system's wiring.



3. Adjust:

- throttle position sensor angle

- a. Lift the throttle body assembly slightly out of the intake manifolds.
- b. Loosen the throttle position sensor screws (4).
- c. Connect the pocket tester (DC20 V) to the throttle position sensor coupler.

Tester positive probe →

yellow terminal ③

Tester negative probe →

black/blue terminal ②



- d. Adjust the throttle position sensor angle so the measured output voltage is within the specified range.



Throttle position sensor output voltage
0.53 ~ 0.83 V

- e. After adjusting the throttle position sensor angle, tighten the throttle position sensor screws (4).

