

GENERAL

See [Figure 7-10](#). The throttle position sensor voltage determines which spark advance curve the ignition module selects. The throttle position sensor (TP Sensor) is located on the carburetor. The TP Sensor is not repairable. Replace the unit if it fails.

See [4.6 THROTTLE POSITION SENSOR](#) for information on replacing the throttle position sensor.

See diagnostic chart on previous page for troubleshooting information.

CALIBRATION/TESTING

NOTE

To gain access to the Throttle Position Sensor, remove the carburetor and air cleaner as an assembly. See [4.4 CARBURETOR](#) and [1.18 AIR CLEANER](#).

1. Adjust throttle position sensor as follows:
 - a. Back off idle adjustment screw so throttle plate is fully closed.
 - b. Completely open and close the throttle by rotating the throttle control through its full range of motion.
 - c. Using special TORX bit (Snap-on® TTXR20E), loosen the two tamper-resistant T20 TORX screws just enough to allow sensor to rotate.
 - d. Disconnect pin 3 in connector [88B] (main wire harness).
 - e. Install BREAKOUT BOX ADAPTORS (Part No. HD-42962) and BREAKOUT BOX (Part No. HD-42682) using black connectors between connector halves [88A] and [88B].
 - f. Turn ignition switch to ON. Using a multimeter, measure voltage between pin 3 (V/W) and pin 5 (BK).
 - g. Adjust (rotate) throttle position sensor (TPS) until voltage reading is 0.5V +/- 0.05V.
 - h. Completely open and close the throttle by rotating the throttle control through its full range of motion. Wide Open Throttle (WOT) should not exceed 3.7V and reading should increase consistently as throttle is opened. If the voltage reading is erratic or the voltage reading at WOT exceeds 3.7V see [Figure 7-10](#) for diagnostic testing.

NOTE

After WOT, the TPS reading may not return back to exactly 0.5V +/- 0.05V. To re-check exact TPS voltage reading, turn cycle key off and on.

- i. Tighten TP Sensor mounting screws to 13-23 in-lbs (2-3 Nm).

2. Install carburetor and air cleaner. See [4.3 AIR CLEANER](#).
3. Adjust idle speed. See [1.20 IGNITION TIMING AND IDLE SPEED ADJUSTMENT](#).

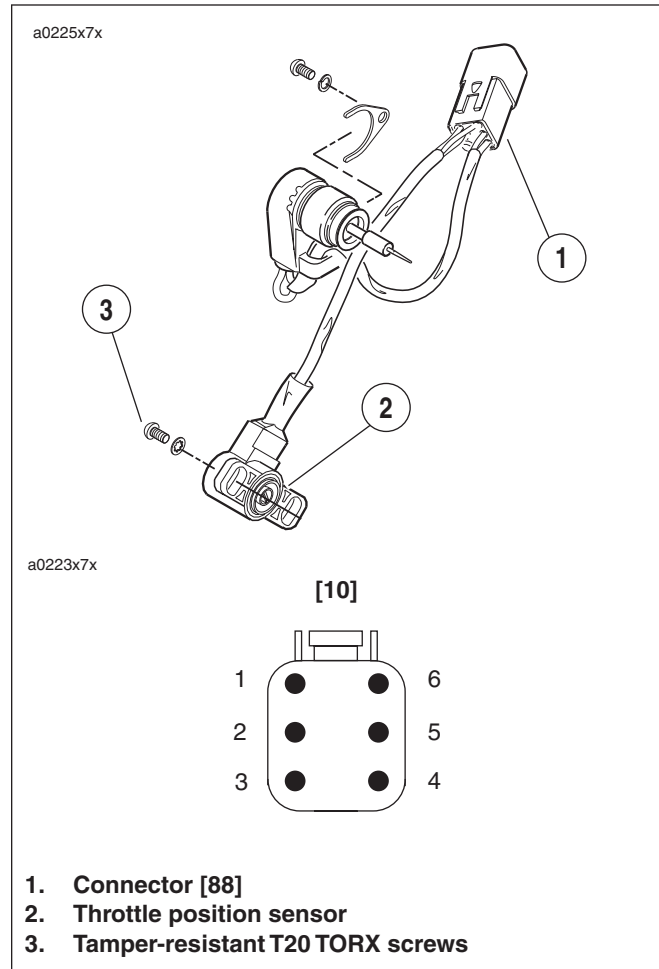


Figure 7-10. Throttle Position Sensor

Table 7-10. Electrical Connector [10]

CHAMBER NUMBER	WIRE COLOR	FUNCTION
1	Violet/Orange	Auto-Enrichener
2	Orange	Auto-Enrichener
3	Light Blue	TP Sensor Output
4	Yellow	TP Sensor Input
5	Black	TP Sensor Ground
6		Not Used