

TP Sensor Voltmeter Test

Meets NATEF Task: (A8-B-7) P-2 Inspect and test sensors, actuators, and circuits using a graphing multimeter (GMM)/digital storage oscilloscope (DSO); perform necessary action.

Name _____ Date _____ Time on Task _____

Make/Model/Year _____ VIN _____ Evaluation: 4 3 2 1

- _____ 1. Check service information for the location, specifications for the throttle position (TP) sensor.
- _____ 2. Carefully back probe the wires at the connector to gain access to the 5-volt reference, signal, and signal return (ground) terminal.
- _____ 3. With the ignition on, engine off (KOEO), set the digital multimeter (DMM) to DC volts and attach the black meter lead to a good clean engine ground.
- _____ 4. Measure the reference voltage (should be close to 5 volts) = _____.
- _____ 5. Measure the sensor signal voltage at idle _____,
specification = _____.
- _____ 6. Measure the TP sensor at wide-open throttle (W.O.T.) = _____ volts
(should be about 4.5 volts).
- _____ 7. Measure the voltage (voltage drop) between the signal return at the TP sensor and a
good clean engine ground.
_____ volts (should be less than 0.2 volts)
- _____ 8. Based on the test results, what is the necessary
action?

