

MAP Sensor Output Chart

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

Name _____ Date _____ Time on Task _____

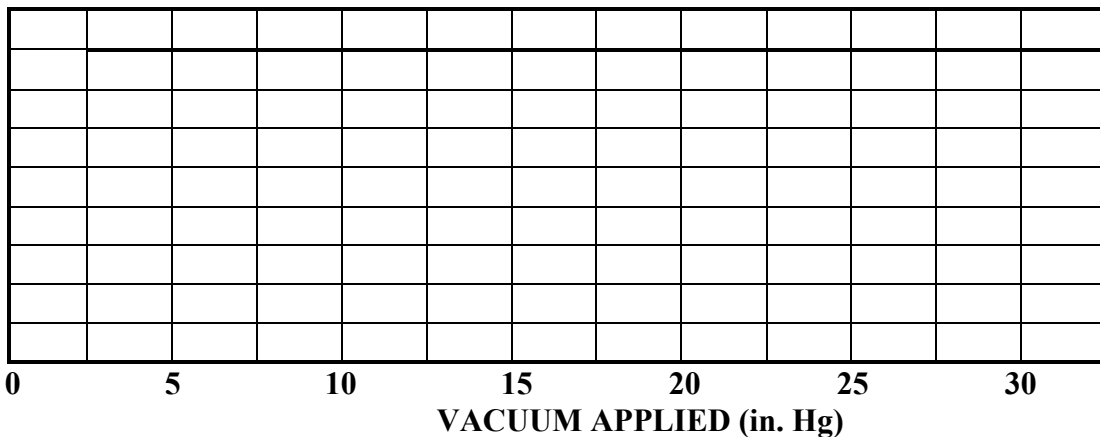
Make/Model/Year _____ VIN _____ Evaluation: 4 3 2 1

Most vehicle MAP sensors use a 5-volt reference, a signal return and a ground connection. As the vacuum inside the intake manifold changes, the MAP sensor voltage changes.

- High vacuum (low absolute manifold pressure) = low voltage
- Low vacuum (high absolute manifold pressure) = high voltage

- _____ 1. Connect a T-pin to the signal wire connector at the MAP sensor.
- _____ 2. Connect the red lead of a digital voltmeter set to read DC volts to the T-pin. Connect the black meter lead to a good chassis ground.
- _____ 3. Disconnect the vacuum hose from the MAP sensor (or remove the sensor from the manifold) and attach a hand-operated vacuum pump to the sensor.
- _____ 4. Place a dot on the graph that represents the MAP sensor voltage when 5, 10, 15, 20, 25 and 30 in. Hg of vacuum is applied to the sensor.
- _____ 5. Connect the dots. The results should be a straight line.

OK _____ NOT OK _____



- _____ 6. Based on the results of this test, what is the necessary action? _____