

MAF Sensor Scope

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

Most mass air flow sensors produce a variable frequency signal or voltage proportional to the amount (mass) of air flowing through the sensor.

_____ 1. Check service information and determine the voltage (analog MAF sensor) or frequency (digital MAF sensor) range for the unit on the vehicle being tested.

_____ 2. Set the scope to 2ms/div and 200 mV/div.

_____ 3. Locate the MAF sensor and connect the scope probe to the signal wire on the sensor by carefully back probing the connector.

_____ 3. Connect the scope probe ground lead to a good non-painted engine or body ground.

_____ 4. Draw the MAF sensor signal at idle speed with the engine in neutral or park.

_____ 5. Place the gear selector in drive or reverse (automatic transmissions only) and draw the MAF sensor signal.

_____ 6. What difference did you notice? _____

_____ 7. Based on the test results, what is the necessary action? _____