ABS Wheel Speed Sensor Testing

Meets NATEF Task: (A5-G-7) Test, diagnose, and service ABS wheel speed sensors. (P-1)

Name _____ **Date** _____ **Time on Task** _____

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

A magnetic wheel speed sensor can fail in a variety of ways including: electrically shorted, open, or grounded.

_____ **1.** Locate and disconnect the wheel speed sensor connector. Hoist the vehicle if necessary.

_____ **2.** Disconnect the wheel speed sensor (WSS) connector and connect a digital meter set to read ohms.

_____ **3.** Measure the resistance at the sensor terminals.

WSS resistance = _____

Compare the resistance to the factory specifications = _____
(usually about 1000 ohms).
OK _____ **NOT OK** _____

_____ **4.** With the meter still set to read ohms, connect one meter lead to a good clean chassis ground and the other lead to one terminal of the WSS connector. This test determines that the WSS is shorted to ground unless the meter indicates infinity (OL).

Meter reading = _____ should be infinity (OL). **OK** _____ **NOT OK** _____

_____ **5.** Set the digital meter to read AC volts.

_____ **6.** Connect the leads of the meter to the terminals of the wheel speed sensor.

_____ **7.** Have an assistant spin the wheel and observe the AC voltage on the meter display.

Reading = _____ AC volts (should be over 0.1 V (100 mV)

OK _____ **NOT OK** _____

_____ **8.** Observe the wheel speed sensor using a graphing multimeter (GMM) or a digital storage oscilloscope (DSO). Draw the waveform displayed while an assistant spins the wheel.