**Meets ASE Task:** (A5-G-7) P-2 Test, diagnose, and service electronic brake control system speed sensors (digital and analog), toothed ring (tone wheel), and circuits using a graphing multimeter (GMM)/digital storage oscilloscope (DSO) (includes output signal, resistance, shorts to voltage/ground, and frequency data).

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date:\_\_\_\_\_\_\_\_\_\_\_\_\_

Time on Task:\_\_\_\_\_\_\_\_\_\_\_\_\_

Make/Model/Year:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

VIN:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Evaluation (Enter number from 4, 3, 2, 1) :\_\_\_\_\_\_\_\_\_

**ABS Wheel Speed Sensor Testing**

Page 331

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

needed.

**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.