Hall-Effect Sensor Scope Test

Meets NATEF Task: (A8-C-2) Inspect and test ignition primary and secondary circuit wiring and solid state components; determine necessary action. (P-1)

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

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

Hall-effect sensors are used by many vehicle manufacturers for crankshaft position or camshaft position. Most Hall-effect sensors use three wires: a power, a signal, and a ground wire.

_____ **1.** Check service information for the recommended procedures and specifications for testing Hall-effect position sensors. _____

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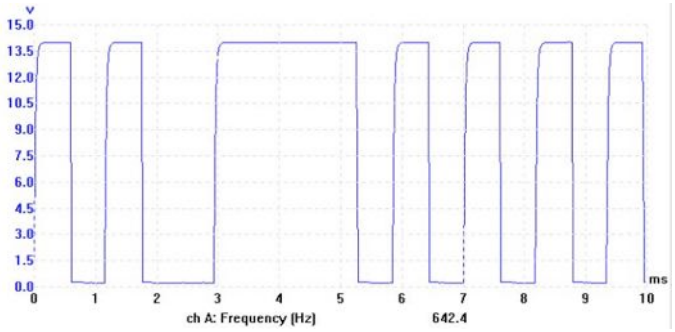
_____ **2.** Locate the Hall-effect sensor to be tested. Carefully back probe the signal wire at the sensor pigtail connector. Connect the scope probe lead to the terminal and connect the probe ground lead to a good engine ground.

_____ **3.** Set the scope settings as follows:

Volts per division = 5 volts DC
Time per division = 10 milliseconds
Trigger level = 1 volt AC (50%)
Trigger slope = positive (+)



_____ **4.** Start the engine and observe the scope pattern. The waveform should have straight vertical rising and falling edges and the ground portion of the signal (horizontal bottom portion of the waveform) should be close to zero volts.

Draw the waveform as displayed here:

_____ **5.** Based on the test results, what is the necessary action? _____

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