

Name \_\_\_\_\_

**SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.**

1) What is the purpose of a MAF sensor?

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2) How does a hot film MAF sensor work?

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3) How is a MAF sensor tested?

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4) What are the types of mass air flow sensors?

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5) What change in the signal will occur if engine speed is increased?

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6) What type of voltage signal is produced by a MAF sensor?

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## Answer Key

Testname: ENGINEPERF5\_SHORT23

- 1) The purpose of the MAF sensor is to measure the mass of the air entering the engine so the PCM can calculate the needed injector pulse width.  
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- 2) A typical mass air flow sensor uses a hot wire to sense the mass of the air entering the engine. The electronics in the sensor itself determine the amount of cooling effect the incoming air exerts on the hot wire and converts this to a voltage or frequency output.  
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- 3) A MAF sensor can be tested using a DMM to check for proper output compared to specifications. A DSO can also be used and the signal checked for proper frequency and waveform shape. A scan tool can also be used to check a MAF sensor for proper operation.  
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- 4) MAF sensors can be hot wire or hot film, and air flow sensors can use a movable vane or Karman-vortex to determine airflow volume.  
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- 5) The frequency or the voltage increases with increased airflow through the sensor.  
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- 6) One type of MAF sensor has a DC volt output, whereas another type uses a frequency output signal.

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