

Name \_\_\_\_\_

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

1) What are the three types of returnless fuel injection systems?

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2) What are the two basic methods used for measuring the amount of air the engine is breathing in, in order to match the correct fuel delivery?

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3) How many sensors are used to determine the base pulse width on a speed-density system?

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4) What is the purpose of the vacuum-controlled (biased) fuel-pressure regulator?

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5) How many sensors are used to determine the base pulse width on a mass air flow system?

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## Answer Key

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1) The three types of returnless systems include mechanical, electronic and on-demand systems.

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2) Fuel-injection computer systems require a method for measuring the amount of air the engine is breathing in, in order to match the correct fuel delivery. There are two basic methods used:

- Speed density
- Mass airflow

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3) On a speed density-type fuel injection system, engine speed (RPM) and the MAP sensor reading are the two most important sensors to determine base pulse width. The base pulse width is then modified by readings from the ECT, IAT, TP, and the oxygen sensor.

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4) The purpose of the vacuum-controlled fuel-pressure regulator is to provide the same differences in pressure across the injectors under all operating conditions.

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5) The base pulse width is primarily determined by the mass air flow (MAF) sensor, but is modified as a result of readings from the ECT, IAT, TP, and the oxygen sensor.

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