

**Chapter 9**

**NAME** \_\_\_\_\_

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

1. What are the differences when charging an AGM battery when compared to a flooded battery?

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2. What are the differences between a flooded and an absorbed glass mat (AGM) style battery?

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3. What is the difference between a mild- and micro-hybrid vehicle?

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4. What are the main advantages of a micro-hybrid system?

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5. Explain how a disable condition will prevent the stop-start system from operating.

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## Answer Key

Testname: EV1SHORT09

1. Most conventional battery chargers use a charging voltage of 16 volts or higher, a charger specifically designed to charge AGM batteries must be used.

The AGM can be charged with high current, up to 75% of the ampere-hour rating due to lower internal resistance. The charging voltage has to be kept at or below 14.4 volts to prevent damage.

Page Ref: 109

2. The acid used in an absorbed glass mat (AGM) battery is totally absorbed into the separator, making the battery leak-proof and spill proof. Unlike conventional batteries that use a liquid electrolyte, called flooded cell batteries, most of the hydrogen and oxygen given off during charging remains inside the battery.

Page Ref: 104

3. A micro hybrid utilizes a stop-start system that operates on a 12-volt system and does not contain any high-voltage components. A mild hybrid utilizes a stop-start system that operates on a voltage that is greater than normal system voltage. The voltage can vary from 36 to 144 volts, depending on the model.

Page Ref: 112; 115

4. The BAS system allows certain hybrid features without the cost associated with an entire redesign of the engine and powertrain. A micro hybrid utilizes a stop-start system that operates on a 12-volt system and does not contain any high-voltage components.

Page Ref: 110; 112

5. In many vehicles equipped with a stop-start, the system will be disabled if:

- A door is open
- An unlatched hood
- An unbuckled driver's seat belt latch
- The climate control system is placed in MAX AC mode
- The transmission is taken out of drive,
- A 4 X 4 truck is placed in low range or is placed in towing mode.

Page Ref: 114