Automotive Electrical and Engine Performance, 8th Edition
Chapter 9

Name_____

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

1) What do the terminals of a typical ISO relay mean?

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2) List the numbers used on schematics to indicate grounds, splices, and connectors and when they are used in the vehicle

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3) How can a tone generator be used to locate a short circuit?

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4) List three methods that can be used to help locate a short circuit.

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5) Why do most experts suggest that the technician start at the relay when diagnosing any circuit that contains a relay?

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1) Terminals 85 and 86 represent the coil of the relay, terminal 30 represents the power in the relay, terminal 87a is the normally closed contact, and terminal 87 is the normally open contact.
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2) Many vehicle manufacturers number circuits starting at the front of the vehicle and moving toward the rear with the 100s meaning under the hood, the 200s under the dash, the 300s in the passenger compartment, and the 400s in the trunk area.
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3) A tone generator is connected to the shorted circuit and a probe is used to locate where the tone stops, indicating the location of the short circuit.
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4) A short circuit can be located by using the fuse replacement method (usually not recommended), the circuit breaker method, the test light method, the ohmmeter method, or by using a gauss gauge or electronic tone generator.
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5) If the circuit contains a relay, start your diagnosis at the relay. The entire circuit can be tested at the terminals of the relay.
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