

## CHAPTER 17 Vehicle Systems and Maintenance

### STUDY GUIDE FOR CHAPTER 17 LESSON 1

## Checking Your Vehicle Before You Drive

A. For each sentence below, circle T if the statement is true and F if it is false. Correct each false statement in the space below.

1. You should check the engine oil level only when the engine is running.    T    F

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2. The radiator cap should be opened only when the radiator is cool.    T    F

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3. A fan belt should be replaced every 5000 miles.    T    F

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4. Your vehicle's brake warning light will make you aware of any brake problems the vehicle may have.    T    F

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5. Brakes should be tested once a month.    T    F

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6. You should check your vehicle's headlights and turn signals every week.    T    F

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7. You can't know the specific guidelines for servicing your vehicle.    T    F

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8. You should ask a mechanic for an estimate before work begins on your vehicle.    T    F

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9. With newer vehicles, many repairs are covered under the vehicle's warranty.    T    F

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10. You should check your vehicle's battery cables to make sure that they are not too tight.    T    F

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B. FIND OUT MORE. Talk to a friend or relative who owns a vehicle. Ask if you can check the vehicle out as a part of your driver's training. Check the battery terminals, oil level, transmission fluid level, coolant level, hoses, wires, and fan belts. Let the owner know what you found, and write your findings below.

\_\_\_\_\_

## STUDY GUIDE FOR CHAPTER 9 LESSON 3

## The Engine and Power Train

A. Briefly describe the function of each of the following parts of a vehicle.

1. spark plug \_\_\_\_\_  
\_\_\_\_\_

2. crankshaft \_\_\_\_\_  
\_\_\_\_\_

3. starter motor \_\_\_\_\_  
\_\_\_\_\_

4. drive wheels \_\_\_\_\_  
\_\_\_\_\_

5. differential \_\_\_\_\_  
\_\_\_\_\_

6. drive shaft \_\_\_\_\_  
\_\_\_\_\_

7. clutch pedal \_\_\_\_\_  
\_\_\_\_\_

8. ignition \_\_\_\_\_  
\_\_\_\_\_

B. FIND OUT MORE. Using three separate situations, record your observations on the ways other drivers handle visibility, time, and space in changing lanes. Where were you? What time of the day was it? Could a collision have occurred because of what you saw?

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\_\_\_\_\_  
\_\_\_\_\_

## STUDY GUIDE FOR CHAPTER 17 LESSON 3

## Understanding and Maintaining Vehicle Systems

A. Match the following terms by placing the letter of the definition or the description of what the item does to the left of the item.

- |                                 |  |
|---------------------------------|--|
| _____ 1. coolant                | a. protects vehicle's electrical circuits from overloading |
| _____ 2. exhaust manifold       | b. pumps coolant through radiator and engine               |
| _____ 3. muffler                | c. collects unburned gasses                                |
| _____ 4. tailpipe               | d. another name for alternator                             |
| _____ 5. catalytic converter    | e. mixture of water and antifreeze                         |
| _____ 6. carbon monoxide        | f. key is used here to start vehicle                       |
| _____ 7. battery                | g. supplies electricity needed to keep engine running      |
| _____ 8. ignition switch        | h. quiets engine noise                                     |
| _____ 9. alternator             | i. moves oil to all moving engine parts                    |
| _____ 10. engine control module | j. controls flow of coolant                                |
| _____ 11. generator             | k. where exhaust gases exit vehicle                        |
| _____ 12. fuse                  | l. an odorless, deadly gas                                 |
| _____ 13. oil pump              | m. controls electric and other vehicle systems             |
| _____ 14. water pump            | n. reduces harmful gas emissions                           |
| _____ 15. thermostat            | o. provides energy to start the engine                     |

B. FIND OUT MORE. Go to your library and find out how a catalytic converter works. Describe your findings below. You may also make a diagram in the space below to show how the catalytic converter works.

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## STUDY GUIDE FOR CHAPTER 17 LESSON 4

## Suspension, Steering, Brakes, and Tires

A. For each sentence below, circle T if the statement is true and F if it is false. Correct each false statement in the space below.

1. The main parts of a suspension system are the springs and the tires.      T      F

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2. Springs are designed to soften the impact of bumps in the roadway.      T      F

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3. Tire tread depth should be at least  $\frac{1}{26}$  inch.      T      F

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4. Your vehicle's tires should be rotated at least every 5000 to 6000 miles.      T      F

\_\_\_\_\_

5. There should be no more than two inches of play in the steering wheel if your vehicle has power steering.      T      F

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B. There are several clues that a vehicle's front end is out of alignment or that the tires need balancing. What are they?

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C. FIND OUT MORE. Ask somebody you know who has a vehicle if you may inspect their tires. What did you check for, and what did you find?

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