

Name: _____ Date: _____
 Instructor: _____ Period: _____

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Anti-Lock Brakes, Traction Control, and Stability Control



Objective: After studying this chapter, you will be able to explain the operation of Anti-Lock Brakes, Traction Control, and Stability Control systems.

Anti-Lock Brake Systems

1. The Anti-Lock Brake system uses _____ sensors, an _____, and a _____ unit to prevent skidding during hard braking.

2. How do good drivers get maximum braking effect on dry pavement?

On slick pavement? (wet, icy, or oily)

3. Without ABS cars tend to slide to the _____ because of higher tire adhesion on the _____.

4. With ABS cars tend to travel _____ during hard braking.

5. Identify the basic parts of the of the Anti-Lock brake system below:

	<p>A. _____</p> <p>B. _____</p> <p>C. _____</p> <p>D. _____</p> <p>E. _____</p> <p>F. _____</p> <p>G. _____</p> <p>H. _____</p>
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6. Explain the function of each ABS component below:

- ABS Control Module _____
- Wheel Speed Sensor _____
- Sensor Rotor _____
- Electro-Hydraulic Modulator _____
- Warning Light _____

7. Wheel sensors produce an ____ signal for the ABS control module.

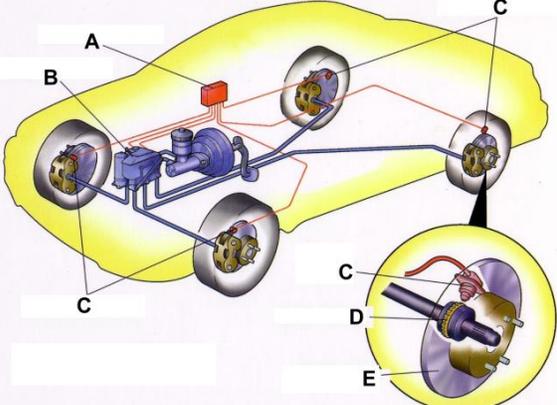
8. As the tire rotates faster the signal from the wheel speed sensor _____.

9. The _____ in the ABS system stores high pressure fluid and caution should be used when servicing.

10. During hard braking a pulsation can be felt in the brake pedal. This is caused by the _____ cycling pressure _____ and _____.

11. The ABS warning light is used to alert the driver to an _____.

12. Identify the ABS system components below:

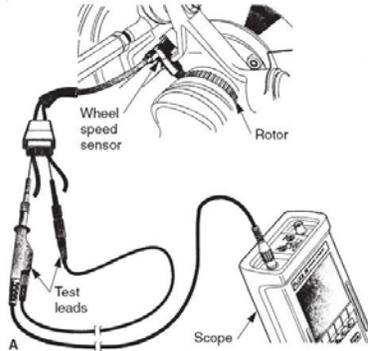
	<p>A. _____</p> <p>B. _____</p> <p>C. _____</p> <p>D. _____</p> <p>E. _____</p>
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13. True or False

Technician A says the ABS system is normally functioning at all times (circle one). True False

Technician B says the ABS system only functions during tire slippage (circle one). True False

14. What test is being performed in the picture below? _____



Traction and Stability Control Systems

15. Describe how traction control uses ABS to keep a wheel from spinning:

16. What two things does a stability control system do?

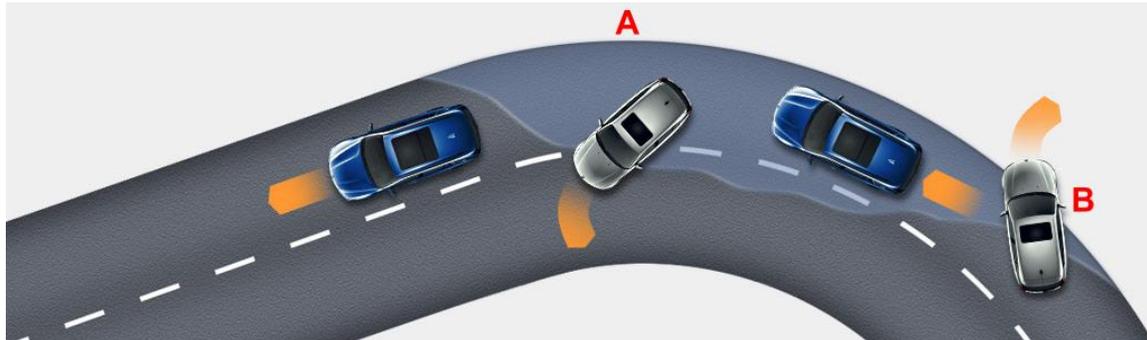
17. What is understeer?

18. What is oversteer?

19. Matching

___ Yaw sensor	<i>A. measures how sharply the steering wheel is rotated</i>
___ Lateral acceleration sensor	<i>B. Measures how much side force is generated in a turn</i>
___ Throttle position sensor	<i>C. Measures the direction of the thrust generated by vehicle movement</i>
___ Steering angle sensor	<i>D. Measures how far the driver is pressing down on the accelerator pedal</i>
___ Brake pressure sensor	<i>E. Measures the amount of hydraulic pressure produced by the driver pressing the brake pedal</i>

20. Understeer and Oversteer



Car A is an example of _____.

Car B is an example of _____.