

# Automotive Technology 6<sup>th</sup> Edition

## Chapter 110 – ABS Components and Operation

### Lesson Plan



#### **CHAPTER SUMMARY:**

1. Antilock brake system, ABS parts involved, ABS channels, and nonintegral ABS
  2. ABS controller inputs and outputs and wheel speed sensors, and
  3. Hydraulic modulator assembly and advanced ABS functions,
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#### **OBJECTIVES:**

1. Explain the need for Antilock brake system (ABS).
  2. Describe the operation, components, and system configurations of ABS.
  3. Explain the operation of passive and active wheel speed sensors.
  4. This chapter will help prepare for the Brakes (A5) ASE certification test content area “D” (Electronic Brake Control Systems: Antilock Brake System (ABS), Traction Control System (TCS), and Electronic Stability Control System (ESC) Diagnosis and Repair).
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**RESOURCES:** (All resources may be found at <http://www.jameshalderman.com>)

1. **Task Sheet ASE (A5-G-1) P-1:** Traction Control/Vehicle Stability
  2. Chapter PowerPoint
  3. Chapter Crossword Puzzle and Word Search
  4. Animations: Antilock Braking System
  5. Videos: See list at the end of the lesson plan.
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#### **ACTIVITIES:**

1. **Task Sheet ASE (A5-G-1) P-1:** Have students complete Traction Control/Vehicle Stability Task Sheet.
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#### **ASSIGNMENTS:**

1. Chapter crossword and word search puzzles.
  2. Complete end of chapter 10 question quiz.
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#### **CLASS DISCUSSION:**

1. Review and group discussion chapter Frequently Asked Questions and Tech Tips sections.
  2. Review and group discussion of the five (5) chapter Review Questions.
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#### **NOTES AND EVALUATION:**

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**Videos:** (at <http://www.jameshalderman.com>)

Hall Effect WSS (time 2:17)  
ABS and traction control (time 18:35)  
Teves Mk 4 ABS (time 23:19)  
ABS (time 4:47)  
ABS by Bosch (time 4:56)  
Toyota ABS (time 1:02)  
ABS brakes (time 3:10)  
ABS VI (time 23:41)  
DBC 7 ABS (time 18:16)  
Traction Control System (time 1:13)  
Wheel Speed Sensors (time 14:39)  
Electronic brakes (time 2:21)  
Electronic brake force distribution (time 1:19)  
Electronic brake force distribution (time 2:34)