

# Automotive Electrical and Engine Performance - 9th edition

## Ch18: Driver Information and Navigation Systems

### Lesson Plan



#### **CHAPTER SUMMARY:**

1. Dash Warning Symbols, Steering Wheel Controls, Voice Activations, and Maintenance Indicators
2. Analog and Digital Displays, Heads-Up Display, Night Vision, Electronic Displays, and Virtual Displays
3. Touch Screens, Speedometers/Odometers, Dash Gauges, Navigation and GPS, and Telematics
4. Backup Camera



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#### **OBJECTIVES:**

1. Identify the meaning of dash warning symbols.
2. Describe steering wheel controls.
3. Describe voice activation.
4. Describe maintenance indicators.
5. Describe analog and digital displays.
6. Discuss the operation of a head-up display.
7. Discuss the operation of night vision systems.
8. Discuss the operation of electronic displays.
9. Discuss the operation of virtual displays.
10. Discuss the operation of touch screens.
11. Describe how speedometers and odometers work.
12. Discuss the diagnosis of oil pressure lamp, temperature lamp, brake warning lamp, and other analog dash instruments.
13. Describe how a navigation system works.
14. Explain the operation and diagnosis of telematics systems.
15. Explain the operation of a backup camera.



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#### **RESOURCES:** (All resources may be found at [jameshalderman.com](http://jameshalderman.com))

1. Task Sheet: Reset Maintenance Indicator
2. Task Sheet: Gauge Diagnosis
3. Task Sheet: Driver Information and Warning Devices
4. Crossword Puzzle and Word Search
5. Videos: (A6) Electrical/Electronic Systems Videos
6. Animations: (A6) Electrical/Electronic Systems Animations



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#### **ACTIVITIES:**

1. Task Sheet: Reset Maintenance Indicator
  2. Task Sheet: Gauge Diagnosis
  3. Task Sheet: Driver Information and Warning Devices
  4. Crossword Puzzle and Word Search
  5. Chapter PowerPoint
  6. Crossword Puzzle and Word Search
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#### **ASSIGNMENTS:**

1. Chapter crossword and word search puzzles from the website.
  2. Complete end of chapter quiz from the textbook.
  3. Complete multiple choice and short answer quizzes downloaded from the website.
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#### **CLASS DISCUSSION:**

1. Review and group discussion chapter Frequently Asked Questions and Tech Tips sections.
  2. Ten (10) question end of Chapter Quiz.
  3. Five (5) end of chapter Review Question for class discussion.
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#### **NOTES AND EVALUATION:**

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