

# Automotive Electricity and Electronics

## Chapter 25 – Driver Information and Navigation Systems

### Lesson Plan



#### **CHAPTER SUMMARY:**

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



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#### **OBJECTIVES:**

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



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

1. Task Sheet: Gauges and Sending Units
2. Task Sheet: Gauge Printed Circuit Boards
3. Task Sheet: Driver Information and Warning Devices
4. Task Sheet: Electronic Instrument Circuits
5. Chapter PowerPoint
6. [Crossword and Word Search Puzzles \(A6\)](#)
7. [Videos: \(A6\) Electrical/Electronic Systems](#)
8. [Animations: \(A6\) Electrical/Electronic Systems](#)



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#### **ACTIVITIES:**

1. Task Sheet: Gauges and Sending Units
2. Task Sheet: Gauge Printed Circuit Boards
3. Task Sheet: Driver Information and Warning Devices
4. Task Sheet: Electronic Instrument Circuits



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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. Review and group discussion of the five (5) chapter [Review Questions](#).

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**Chapter 24 – Lighting and Signaling Circuits**  
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**NOTES AND EVALUATION:**

