**Advanced Engine Performance Diagnosis 7th Edition**

**Chapter 4 –** **Oscilloscopes and DSOs**

**Lesson Plan**

**CHAPTER SUMMARY:**

1. Types of Oscilloscopes, Scope Setup and Adjustment, and DC and AC Coupling

2. Pulse Trains, Number of Channels, Triggers, and Using a Scope

3. Using DSO Accessories and Waveform Analysis

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**OBJECTIVES:**

1. Compare the different types of oscilloscopes.

2. Explain how to set up and adjust an oscilloscope.

3. Compare the DC coupling and AC coupling positions on a scope.

4. Describe pulse train signals.

5. Describe scope channels and triggers.

6. Explain how to use a scope and a current clamp to diagnose an electrical circuit.

7. Describe how to analyze a waveform.

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

1. Task Sheet: Oscilloscope Testing

2. Chapter PowerPoint

3. [Crossword and Word Search Puzzles](https://jameshalderman.com/a6_puzzles_lib_page/)

4. [Videos: (A6) Electrical/Electronic Systems](https://jameshalderman.com/a6_vid_lib_page/)

5. [Animations: (A6) Electrical/Electronic Systems](https://jameshalderman.com/a6_anim_lib_page/)

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**ACTIVITIES:**

1. Task Sheet: Oscilloscope Testing

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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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**NOTES AND EVALUATION:**

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