Advanced Engine Performance Diagnosis 8th Edition
Chapter 5 – Digital Storage Oscilloscope, Operation and Use
Lesson Plan

CHAPTER SUMMARY:

1. Types of Oscilloscopes, Scope Setup and Adjustment, and DC and AC Coupling
2. Pulse Trains, Number of Channels, Triggers, Using a Scope, and Using DSO Accessories
3. Waveform Analysis

OBJECTIVES:

1. Explain the advantages of a digital storage oscilloscope.
2. Describe the process for adjusting the oscilloscope time base and voltage scale.
3. Explain the difference between Ac and Dc coupling.
4. Describe the different pulse train measurement scales.
5. Explain the purpose of multiple scope channels.
6. Explain the purpose of a trigger.
7. Explain how a scope is used.
8. Describe the operation of a current clamp and pressure transducer.
9. Explain how to analyze a waveform.

RESOURCES: (All resources may be found at jameshalderman.com)

1. Task Sheet: Oscilloscope Testing
2. Chapter PowerPoint
3. Crossword and Word Search Puzzles
4. Videos: (A6) General Electrical/Electronic System Diagnosis
5. Animations: (A6) General Electrical/Electronic System Diagnosis

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ACTIVITIES:

1. Task Sheet: Oscilloscope Testing

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.

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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