**Automotive Electrical and Engine Performance - 9th edition**

**Ch44: On-Board Diagnosis**

**Lesson Plan**

**CHAPTER SUMMARY:**

1. On-Board Diagnostics and Generation-II (OBD-II) Systems and Diagnostic Executive and Task Manager

2. Monitors, OBD-II Monitor Information, Enabling Criteria, and OBD-II DTC Numbering Designation

3. OBD-II Freeze-Frame, Enabling Conditions, PCM Tests, and Global OBD-II

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**OBJECTIVES:**

1. Explain the purpose and function of OBD systems.

2. Discuss the diagnostic executive.

3. List the various continuous and noncontinuous monitors.

4. Discuss OBD-II monitor information.

5. Explain enabling criteria.

6. Explain the numbering designation of OBD-II diagnostic trouble codes.

7. Explain the information captured by freeze-frame.

8. Describe the criteria to enable an OBD monitor.

9. Describe PCM tests related to OBD systems.

10. List the operation modes of a global scan tool.

11. Describe mode six diagnosis. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

1. Task Sheet: OBD II Monitors Status

2. Task Sheet: Retrieve DTCs, Monitor Status & Freeze Frame

3. Crossword Puzzle and Word Search

4. Videos: (A8) Engine Performance Videos

5. Animations: (A8) Engine Performance Animations

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**ACTIVITIES:**

1. Task Sheet: OBD II Monitors Status

2. Task Sheet: Retrieve DTCs, Monitor Status & Freeze Frame

3. Chapter PowerPoint

4. 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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