**Advanced Engine Performance Diagnosis 7th Edition**

**Chapter 10 –** **On-Board Diagnosis**

**Lesson Plan**

**CHAPTER SUMMARY:**

1. On-Board Diagnostics Generation-II (OBD-II) Systems and OBD-II DTC Numbering Designation

2. OBD-II Freeze-Frame, Diagnostic Executive or Task Manager, and Monitors

3. Non-Continuous (Once-Per-Trip) Monitors

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**OBJECTIVES:**

1. Understand the purpose and function of on-board diagnostics generation-II (OBD-II) systems.

2. Discuss the numbering designation of OBD-II diagnostic trouble codes.

3. List the types of information obtained from a freeze-frame.

4. Understand the information obtained from an on-board diagnostics monitor and the criteria to enable an OBD monitor.

5. List the continuous and non-continuous monitors.

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

1. Task Sheet: Drive Trace Pre-Conditioning

2. Task Sheet: OBD II Connector Identification

3. Task Sheet: Retrieving OBD II Diagnostic Trouble Codes

4. Task Sheet: Set Opposite Code

5. Task Sheet: Freeze Frame and MIL Activity

6. Task Sheet: Step-by-Step Diagnosis

7. Task Sheet: Fuel-Related Scan Data

8. Task Sheet: Misfire Monitor Activity

9. Task Sheet: I/M Monitors Status

10. Task Sheet: Repair Verification

11. Chapter PowerPoint

12. [Crossword and Word Search Puzzles](https://jameshalderman.com/a8_puzzles_lib_page/)

13. [Videos: (A8) Engine Performance](https://jameshalderman.com/a8_vid_lib_page/)

14. [Animations: (A8) Engine Performance](https://jameshalderman.com/a8_anim_lib_page/) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**ACTIVITIES:**

1. Task Sheet: Drive Trace Pre-Conditioning

2. Task Sheet: OBD II Connector Identification

3. Task Sheet: Retrieving OBD II Diagnostic Trouble Codes

4. Task Sheet: Set Opposite Code

5. Task Sheet: Freeze Frame and MIL Activity

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**Chapter 10 –** **On-Board Diagnosis**

**Lesson Plan**

**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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