

Automotive Technology 6th Edition

Chapter 89 – Onboard Diagnosis

Lesson Plan

CHAPTER SUMMARY:



1. On-board diagnostics 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 mode
 4. Diagnosing problems using mode six
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OBJECTIVES:



1. Explain the purpose and function of systems.
 2. List the various continuous and noncontinuous monitors.
 3. Explain the numbering designation of OBD-II diagnostic trouble codes.
 4. Explain the information captured by freeze-frame and the criteria to enable an OBD monitor.
 5. Describe PCM tests related to OBD systems.
 6. List the operation modes of a global scan tool.
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RESOURCES: (All resources may be found at <http://www.jameshalderman.com>)



1. **Task Sheet ASE (A8-A-2) P-1:** OBD II Connector Identification
 2. **Task Sheet ASE (A8-B-1) P-1:** Retrieving OBD II Diagnostic Trouble Codes
 3. **Task Sheet ASE (A8-B-1) P-1, (A8-B-4) P-1:** OBD II Monitors Status
 4. Chapter PowerPoint
 5. Chapter Crossword Puzzle and Word Search
 6. Animations: DTC and Retrieving Trouble Codes - Code Reader
 7. Videos: OBD 1 (time 4:36), Flash a PCM (time 1:56), and ECM diagnosis (time 2:22)
 8. Videos: PCM driver testing part 1 (time 3:11) and PCM driver testing part 2 (time 3:10)
 9. Videos: K Line OBD protocol (time 2:01)
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ACTIVITIES:



1. **Task Sheet ASE (A8-A-2) P-1:** Have students complete OBD II Connector Identification Task Sheet.
 2. **Task Sheet ASE (A8-B-1) P-1:** Have students complete Retrieving OBD II Diagnostic Trouble Codes Task Sheet.
 3. **Task Sheet ASE (A8-B-1) P-1, (A8-B-4) P-1:** Have students complete OBD II Monitors Status Task Sheet.
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ASSIGNMENTS:



1. Chapter crossword and word search puzzles.
 2. Complete end of chapter 10 question quiz.
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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:


