

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

