

# Automotive Technology 6<sup>th</sup> Edition

## Chapter 76 – MAP/BARO Sensors

### Lesson Plan



#### **CHAPTER SUMMARY:**

1. Air pressure-high and low and principles of pressure sensors
  2. Construction of manifold absolute pressure sensors and PCM uses of the MAP sensor
  3. Barometric pressure sensor, testing the MAP sensor, and MAP/BARO diagnostic trouble codes
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#### **OBJECTIVES:**

1. Discuss the variations in pressure that can occur within an engine.
  2. Discuss how MAP sensors work. Discuss the PCM uses for the MAP sensor.
  3. Describe how the BARO sensor is used to test altitude.
  4. List the methods for testing MAP sensors and describe the symptoms of a failed MAP sensor.
  5. This chapter will help prepare for engine Repair (A8) ASE certification test content area “E” (Computerized engine Controls Diagnosis and Repair).
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**RESOURCES:** (All resources may be found at <http://www.jameshalderman.com>)

1. **Task Sheet ASE (A8-A-9) P-2:** MAP Sensor Diagnosis
  2. Chapter PowerPoint
  3. Chapter Crossword Puzzle and Word Search
  4. Videos: MAP sensor (time 6:04), MAP sensor signal circuit (time 1:31), and MAP sensor (time 1:56)
  5. Videos: MAP sensor signal circuit (time 1:31) and MAP sensor reference circuit (time 1:23)
  6. Videos: MAP sensor (time 0:41), MAP sensor (time 2:05), and MAP SENSOR TESTING (time 1:45)
  7. Videos: MAP sensor wiring (time 2:46) and MAP sensor (time 6:04)
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#### **ACTIVITIES:**

1. **Task Sheet ASE (A8-A-9) P-2:** Have students complete MAP Sensor Diagnosis 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:**

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