# Automotive Technology 6th Edition
# Chapter 86 – Exhaust Gas Recirculation Systems
# Lesson Plan

**CHAPTER SUMMARY:**

1. Exhaust gas recirculation systems and OBD-II EGR monitoring strategies
2. Diagnosing a defective EGR system and EGR-related OBD-II diagnostic trouble codes

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**OBJECTIVES:**

1. Discuss the purpose and function of exhaust gas recirculation (EGR) systems.
2. Explain the strategies to monitor onboard diagnostics generation II (OBD-II) exhaust gas recirculation (EGR) systems.
3. Explain how to diagnose a defective EGR system.

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

**1. Task Sheet ASE (A8-E-3) P-2**: EGR System Diagnosis
**2**. Task Sheet ASE (A8-E-3) P-2: Service EGR System
**3**. Task Sheet ASE (A8-E-3) P-2: EGR Electrical Sensors
4. Chapter PowerPoint
5. Chapter Crossword Puzzle and Word Search
6. Animations: Exhaust Gas Recirculation
7. Videos: See list at the end of the lesson plan.

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**ACTIVITIES:**

**1. Task Sheet ASE (A8-E-3) P-2:** Have students complete EGR System 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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**Videos**: (at http://www.jameshalderman.com)

EGR Valve (time 0:45)
EGR port cleaning (time 5:13)
Ford DPFE sensor (time 4:31)
EGR position sensor (time 1:43)
EGR pintle position sensor (time 1:57)
EGR diagnostics (time 4:30)
EGR inspection and testing (time 17:12)
EGR temperature sensor (time 0:50)
Scanning EGR valve perimeter (time 2:18)
EGR temp sensor (time 0:50)
EGR system (time 2:08)