# Automotive Technology 7<sup>th</sup> Edition Chapter 109 – Tires-Pressure Monitoring Systems Lesson Plan

#### CHAPTER SUMMARY:

- 1. Need for Tire Pressure Monitoring, Tread Act, Indirect TPMS, and Direct TPMS
- 2. TPMS Pressure Sensors, TPMS Sensor Operation, TPMS Receiver, and TPMS Diagnosis
- 3. TPMS Sensor Activations, TPMS Diagnostic Tools, and Sensor Replacement Options
- 4. TPMS Sensor Relearn, TPMS Sensor Service Tools

## **OBJECTIVES**:

- 1. Explain why a tire-pressure monitoring system (TPMS) is used.
- 2. Discuss the TREAD Act.
- 3. Explain indirect TPMS.
- 4. Explain direct TPMS.
- 5. List the two types of TPMS pressure sensors.
- 6. Discuss TPMS sensor operation.
- 7. Discuss the TPMS receiver.
- 8. Explain direct TPMS diagnosis.
- 9. Explain TPMS sensor activations.
- 10. Describe TPMS diagnostic tools.
- 11. List replacement options for TPMS sensors.
- 12. Describe how to relearn TPMS sensors.
- 13. Describe the tools needed to service a TPMS.

## **RESOURCES:** (All resources may be found at jameshalderman.com)

- 1. Task Sheet: Tire Pressure Monitoring System
- 2. Crossword Puzzle and Word Search
- 3. Chapter PowerPoint
- 4. Videos: (A4) Suspension and Steering Videos
- 5. Animations: (A4) Suspension and Steering Animations



- 1. Task Sheet: Tire Pressure Monitoring System
- 2. Crossword Puzzle and Word Search



DEMO

## 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.



## 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 <u>Review Questions</u>.



#### NOTES AND EVALUATION:



