

# Automotive Technology 7<sup>th</sup> Edition

## Chapter 14 – Preventative Maintenance and Service Procedures

### Lesson Plan



#### **CHAPTER SUMMARY:**

1. Preventative Maintenance, Getting Ready for Service, and Safety Inspection
2. Windshield Wiper and Washer Fluid Service, and Cabin Filter Replacement
3. Air Filter Inspection/Replacement, Brake Fluid Inspection, and Engine Oil Inspection
4. Cooling System Inspection, Automatic Transmission Fluid Check, Power Steering Fluid
5. Accessory Drive Belt Inspection, Tire and Wheel Service, and Chassis Lubrication
6. Differential Fluid Check and Manual Transmission/Transaxle Lubricant Check
7. Upper Vehicle Inspection and Diesel Exhaust Fluid



#### **OBJECTIVES:**

1. List the items or systems that require routine maintenance and describe when it should be performed.
2. Describe the steps to follow when getting a vehicle ready for service.
3. Explain the process to be followed in safety inspection.
4. Explain the process to be followed in windshield wiper service.
5. Explain the process to be followed in cabin filter replacement.
6. Explain the process to be followed in air filter inspection/replacement.
7. Describe the brake fluid inspection procedure.
8. Describe the engine oil inspection procedure.
9. Explain the process of inspecting the cooling system.
10. Explain the automatic transmission fluid check.
11. Explain how to check power steering fluids.
12. Describe how to measure accessory belt tension.
13. Describe how to check wheels and tires.
14. Describe how to lubricate the chassis.
15. Describe how to check the differential fluid.
16. Describe how to check the manual transmission fluid.
17. Describe how to perform under-vehicle inspection.
18. Discuss the purpose and function of diesel exhaust fluid (DEF).



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

1. Task Sheet: Safety Check
2. Task Sheet: Windshield Wiper Blade Service
3. Task Sheet: Engine Oil Dipstick
4. Task Sheet: Engine Oil Change
5. Task Sheet: Accessory Drive Belt Inspection
6. Task Sheet: Tire Rotation
7. Task Sheet: Lubrication Service
8. Task Sheet: Engine Fluids Check
9. Task Sheet: Diesel Exhaust Fluid
10. Chapter PowerPoint
11. Crossword Puzzle and Word Search
12. Videos: [\(A0\) Automotive Fundamentals Videos](#)
13. Animations: [\(A0\) Automotive Fundamentals Animations](#)

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**ACTIVITIES:**

1. Task Sheet: Safety Check
2. Task Sheet: Windshield Wiper Blade Service
3. Task Sheet: Engine Oil Dipstick
4. Task Sheet: Engine Oil Change
5. Task Sheet: Accessory Drive Belt Inspection
6. Task Sheet: Tire Rotation
7. Task Sheet: Lubrication Service
8. Task Sheet: Engine Fluids Check
9. Task Sheet: Diesel Exhaust Fluid
10. 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. Review and group discussion of the five (5) chapter Review Questions.



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**NOTES AND EVALUATION:**

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