

Automotive Technology 5th Edition

Chapter 6 SHOP SAFETY


Opening Your Class








| KEY ELEMENT | EXAMPLES |
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| Introduce Content | This Automotive Technology 5 th text provides complete coverage of automotive components, operation, design, and troubleshooting. It correlates material to task lists specified by ASE and NATEF and emphasizes a problem-solving approach. Chapter features include Tech Tips, Frequently Asked Questions, Real World Fixes, Videos, Animations, and NATEF Task Sheet references. |
| Motivate Learners | Explain how the knowledge of how something works translates into the ability to use that knowledge to figure why the engine does not work correctly and how this saves diagnosis time, which translates into more money. |
| State the learning objectives for the chapter or course you are about to cover and explain this is what they should be able to do as a result of attending this session or class. | Explain the chapter learning objectives to the students as listed on the second SLIDE. <ol style="list-style-type: none">1. Identify situations where hearing protection should be worn.2. Describe the personal protective equipment (PPE) used by technicians.3. Explain the safety tips for technicians and the cleaning methods and processes used in vehicle service.4. Discuss shop safety procedures.5. Discuss the purpose of fire extinguishers, fire blankets, and first aid and eye wash stations. |
| Establish the Mood or Climate | Provide a WELCOME , Avoid put downs and bad jokes. |
| Complete Essentials | Restrooms, breaks, registration, tests, etc. |
| Clarify and Establish Knowledge Base | Do a round robin of the class by going around the room and having each student give their backgrounds, years of experience, family, hobbies, career goals, or anything they want to share. |







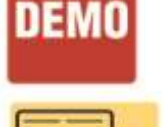





NOTE: This lesson plan is based on the 5th Edition Chapter Images found on Jim's web site @

www.jameshalderman.com

[LINK CHP 6: ATE5 CHAPTER IMAGES](#)

| ICONS | Ch06 Shop Safety |
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|  | <p>1. SLIDE 1 Ch06 Safety in Shop</p> <p>SAFETY IS NOT JUST A BUZZWORD ON A POSTER IN WORK AREA. SAFE WORK HABITS CAN REDUCE ACCIDENTS AND INJURIES, EASE WORKLOAD, AND KEEP EMPLOYEES PAIN FREE.</p> <p>Check for ADDITIONAL VIDEOS & ANIMATIONS @ http://www.jameshalderman.com/ WEB SITE IS CONSTANTLY UPDATED</p> <p><u>VIDEO</u> <u>HTTP://WWW.YOUTUBE.COM/WATCH?V=G8X9G3TISHK</u></p> <p><u>RESEARCH INTERNET FOR OSHA: HAVE STUDENTS RESEARCH & REPORT ON HISTORY OF OSHA & WHAT THEY DO TODAY.</u></p> <p><u>GUEST SPEAKER: INVITE SERVICE TECHNICIAN TO DESCRIBE IMPORTANCE OF SAFETY IN SHOP</u></p> <p>2. SLIDE 2 FIGURE 6-1 EXPLAIN Safety glasses should be worn at all times when working on or around any vehicle or servicing any component.</p> <p>HOLD <u>DISCUSSION</u> ON PPE ASK STUDENTS TO TALK ABOUT THE MAJOR TYPES OF PPE THEY SHOULD WEAR IN SHOP</p> <p>3. SLIDE 3 FIGURE 6-2 EXPLAIN Steel-toed shoes are a worthwhile investment to help prevent foot injury due to falling objects.</p> <p>4. SLIDE 4 FIGURE 6-3 EXPLAIN Protective gloves such as these vinyl gloves are available in several sizes.</p> <p>5. SLIDE 5 FIGURE 6-4 EXPLAIN One version of a bump cap is this padded plastic insert that is worn inside a regular cloth cap.</p> |

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|       | <p>6. SLIDE 6 FIGURE 6-5 EXPLAIN that jewelry may get caught on something or act as a conductor to an exposed electrical circuit. Take care of your hands. Keep your hands clean by washing with soap and hot water that is at least 110°F (43°C). Avoid loose or dangling clothing. Also, ear protection should be worn if sound around you requires that you raise your voice (higher than 90 decibels).</p> <p><u>DISCUSSION ON LONG HAIR IN SHOP: ASK STUDENTS ABOUT SAFETY HAZARD OF HAVING LONG HAIR AND HOW TO DEAL WITH IT</u></p> <p><u>DEMONSTRATE: HOOKING UP EXHAUST HOSE: DEMONSTRATE HOW TO CONNECT AN EXHAUST HOSE TO A VEHICLE. THEN HAVE YOUR STUDENTS PERFORM THIS TASK</u></p> <p>7. SLIDE 7 FIGURE 6-6 EXPLAIN that you MUST always connect an exhaust hose to the tailpipe of engine of vehicle to be run inside building.</p> <p>8. SLIDE 8 FIGURE 6-7 EXPLAIN magnetic tray is a helpful item to keep tools needed up where they can be easily reached without having to bend over saving time.</p> <p><u>HANDS-ON TASK</u> COMPLETE SHOP SAFETY CHECKLIST TASK SHEET PAGE 8</p> <p>9. SLIDE 9 FIGURE 6-8 EXPLAIN electric pusher used to push vehicles into or around the shop.</p> <p>10. SLIDE 10 FIGURE 6-9 EXPLAIN All oily shop cloths should be stored in a metal container equipped with a lid to help prevent spontaneous combustion.</p> <p>11. SLIDE 11 FIGURE 6-10 EXPLAIN Jumper cable usage guide</p> <p>12. SLIDE 12 FIGURE 6-11 EXPLAIN The air pressure going to the nozzle should be reduced to 30 PSI or less.</p> |
|  | <p>13. SLIDE 13 FIGURE 6-12 EXPLAIN fire extinguisher designed to be used on type class A, B, or C fires.</p> <p>14. SLIDE 14 FIGURE EXPLAIN 6-13 CO₂ fire extinguisher being used on fire set in an open steel drum during demonstration at a fire department training center</p> |

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|  | RESEARCH INTERNET FOR INFORMATION ON EQUIPPING A SHOP WITH THE PROPER TYPE OF FIRE EXTINGUISHERS. |
|  | 15. SLIDE 15 FIGURE 6-14 EXPLAIN A treated wool blanket is kept in this easy-to-open wall-mounted holder and should be placed in a centralized location in shop. |
|  | <u>DEMONSTRATE</u> FIRE EXTINGUISHER ALONG WITH LOCATION OF FIRE BLANKET |
|  | <u>HANDS-ON TASK</u> COMPLETE <u>FIRE EXTINGUISHER</u> TASK SHEET PG 9 |
|  | 16. SLIDE 16 FIGURE 6-15 EXPLAIN A first aid box should be centrally located in the shop and kept stocked with recommended supplies. |
|  | 17. SLIDE 17 FIGURE 6-16 EXPLAIN typical eye wash station. Often a thorough flushing of the eyes with water is the best treatment in the event of eye contamination. |
|  | <u>DEMONSTRATE</u> USE OF EYE WASH STATION SHOW LOCATION OF FIRST AID & EYE WASH STATIONS. DEMO EYE WASH STATION |
|  | 18. SLIDE 18 FIGURE 6-17 EXPLAIN evacuation routes from where you are in building is shown on maps that are attached to the walls in schools and commercial buildings. |
|  | 19. SLIDE 19 FIGURE 6.18 EXPLAIN properly marked aisle using yellow paint strips leading to an exit. SHOW <u>ANIMATION ON EVACUATION ROUTES</u> <u>Evacuation Routes (View) (Download)</u> |
|  | <u>HOMWORK</u> HAVE STUDENTS WRITE PREPARE LIST OF AT LEAST 10 AUTOMOTIVE SHOP SAFETY PROCEDURES. |
|  | <u>HOMWORK</u> CROSSWORD PUZZLE (MICROSOFT WORD) (PDF) WORD SEARCH PUZZLE (MICROSOFT WORD) (PDF) |
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