




















Automotive Engines








Chapter 8 Vehicle Service Information



Opening Your Class

KEY ELEMENT	EXAMPLES
Introduce Content	This engine systems course or class provides complete coverage of the 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. <ol style="list-style-type: none">1. Discuss the importance of vehicle history.2. Retrieve vehicle service information.3. Read and interpret service manuals and electronic service information.4. Describe the use of the vehicle owner's manual.
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.

ICONS	Ch8 Vehicle Service Information
       	<p>1. SLIDE 1 TITLE: SERVICE INFORMATION</p> <p>2. SLIDES 2-3 EXPLAIN OBJECTIVES & KEY TERMS</p> <p>4. SLIDE 4 READ & EXPLAIN Vehicle Service History Records</p> <p>5. SLIDE 5 READ & EXPLAIN Owner's Manuals</p> <p>6. SLIDE 6 EXPLAIN LUBRICATION GUIDES</p> <p>Check for ADDITIONAL VIDEOS & ANIMATIONS @ http://www.jameshalderman.com/ WEB SITE REGULARLY UPDATED</p> <p><u>DISCUSSION:</u> ask students to review samples of vehicle owner's manuals. Ask students to speculate about why so few owners read these manuals</p> <p>7. SLIDE 7 EXPLAIN Service Manual INFO</p> <p>8. SLIDE 8 EXPLAIN FIGURE 8-1 Many service manuals include diagnostic information as well as specifications and repair procedures</p> <p><u>DEMONSTRATION:</u> show students examples of factory & aftermarket service manuals. How are these different from owner's manuals? How are these service manuals different from each other?</p> <p><u>DEMONSTRATION</u> show students an example of a vehicle service history, and discuss why it's such an important record to a technician servicing vehicle.</p> <p><u>HOST DISCUSSION: SERVICE HISTORY</u> We all have our own service history, as documented in our medical records. How do physicians use medical histories to help patients? How is this similar to an automotive technician diagnosing a problem with an automobile? Use this analogy as basis for class discussion. Use one column on flip chart or blackboard to show elements of medical history. Use another column for corresponding elements of an automotive service history.</p> <p>9. SLIDE 9 EXPLAIN Service Manual INFO</p>

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	10. SLIDE 10 EXPLAIN TECH TIP
	HOST A DISCUSSION ON ADVANTAGES VS. DISADVANTAGES OF HARD COPY VS. ELECTRONIC SERVICE INFORMATION
	11. SLIDE 11 EXPLAIN FIGURE 8-2 An exploded view of an engine as shown in a time and parts guide
	12. SLIDE 12 EXPLAIN TECH TIP
	13. SLIDES 13-14 EXPLAIN Advantages of Hard Copy vs. Electronic Service Information
	15. SLIDE 15 EXPLAIN TECH TIP
	16. SLIDE 16 EXPLAIN Look for Service times & EXPLAIN FIGURE 8-3 main menu showing major systems of vehicle. Clicking on one of these major topics opens up another menu showing more detailed information
	17. SLIDE 17 EXPLAIN TYPES OF SERVICE INFORMATION
	18. SLIDE 18 EXPLAIN TYPES OF SERVICE INFORMATION & EXPLAIN FIGURE 8-4 Whenever calling a hot line service be sure that you have all of the vehicle information ready and are prepared to give answers regarding voltage readings or scan tool data when talking to the vehicle specialist & FIGURE 8-5 Typical vacuum diagram as shown in a factory service manual
	19. SLIDE 19 EXPLAIN TYPES OF SERVICE INFORMATION & EXPLAIN FIGURE 8-6 A typical electrical wiring diagram manual & FIGURE 8-7 Typical factory service manual wiring schematic
	20. SLIDE 20 EXPLAIN TYPES OF SERVICE INFORMATION & EXPLAIN FIGURE 8-8 A component locator manual is a helpful manual to have, especially if work is being performed on a vehicle with which you are not familiar & FIGURE 8-9 A component location guide typically shows the location of

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	<p>components in words and in figures</p> <p>21. SLIDE 21 EXPLAIN LABOR GUIDE MANUALS</p> <p>22. SLIDE 22 EXPLAIN & FIGURE 8–10 Some guides include labor information only. Labor (and parts) guides help the customer, too, because these guides give customers an accurate cost estimate of the needed repair & FIGURE 8–11 A typical time guide showing the times specified for the replacement or reconditioning of components.</p> <p>23. SLIDE 23 EXPLAIN HOW TO USE HARD COPY MANUALS & FIGURE 8–12 The wise service technician starts to look for service information at the front of the manual in the table of contents & FIGURE 8–13 Many pages are numbered with the section, as in this case 11, followed by the page number 27 in that section</p> <p>24. SLIDE 24 EXPLAIN FIGURE 8–14 The component location section of a service manual is very helpful, especially when working on an unfamiliar vehicle</p>
	<p>25. SLIDE 25 EXPLAIN CHART 8-1 chart showing symptoms for hesitation while accelerating. These charts help technician diagnose faults that do not set a diagnostic trouble code (DTC).</p>
	<p>26. SLIDE 26 READ & EXPLAIN ESI</p>
	<p>27. SLIDE 27 EXPLAIN FREQUENTLY ASKED QUESTION</p>
	<p>28. SLIDE 28 READ & EXPLAIN Hotline Services</p>
	<p>29. SLIDE 29 EXPLAIN TECH TIP</p>
	<p>30. SLIDE 30 READ & EXPLAIN Specialty Repair Manuals</p> <p>31. SLIDE 31 READ & EXPLAIN Aftermarket Supplies Guides and Manuals</p>

ICONS	Ch8 Vehicle Service Information
 	<p data-bbox="623 264 1341 302">Talk through SUMMARY and questions</p> <p data-bbox="586 420 1312 457"><u>HOMEWORK:</u> COMPLETE CH8 CROSSWORD</p> <p data-bbox="586 464 719 491">PUZZLE:</p> <p data-bbox="586 499 1414 558"><u>HTTP://WWW.JAMESHALDERMAN.COM/LINKS/BOOK_ENGINE_THEORY_SERV_7/CW/CROSSWORD_CH_8.PDF</u></p>