

Automotive Technology 6th Edition

Chapter 11 Vehicle Lifting & Hoisting

Opening Your Class

KEY ELEMENT	EXAMPLES
Introduce Content	This Automotive Technology 6th text provides complete coverage of automotive components, operation, design, and troubleshooting. It correlates material to task lists specified by ASE and ASEEducation (NATEF) and emphasizes a problem-solving approach. Chapter features include Tech Tips, Frequently Asked Questions, Case Studies, Videos, Animations, and ASEEducation (NATEF) Task Sheets.
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: <ol style="list-style-type: none"> 1. Discuss the purpose and function of floor jacks and creepers. 2. Describe vehicle hoists and drive-on ramps, and discuss the proper methods to follow to safely hoist a vehicle.
Establish the Mood or Climate	Provide a <i>WELCOME</i> , 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 6th Edition Chapter Images found on Jim's web site @

www.jameshalderman.com

DOWNLOAD Chapter 11 Chapter Images: From

<http://www.jameshalderman.com/>

[automotive_principles.html](http://www.jameshalderman.com/automotive_principles.html)NOTE: You can use Chapter Images or possibly Power Point files:

ICONS	Ch11 Vehicle Lifting & Hoisting
	<p>1. SLIDE 1 Chapter 11 Vehicle Lifting & Hoisting</p>
	<p>Check for ADDITIONAL VIDEOS & ANIMATIONS @ http://www.jameshalderman.com/ WEB SITE IS CONSTANTLY UPDATED</p>
	<p>http://www.jameshalderman.com/automotive_principles.html</p> <p>DOWNLOAD</p> <p>Crossword Puzzle (Microsoft Word) (PDF)</p> <p>Word Search Puzzle (Microsoft Word) (PDF)</p>
	<p>2. SLIDE 2 EXPLAIN Figure 11-1 hydraulic hand-operated floor jack.</p> <p>3. SLIDE 3 Figure 11-2 EXPLAIN Safety stands are being used to support the rear of this vehicle. Notice a creeper also.</p>
	<p><u>DEMONSTRATE USE OF A FLOOR JACK</u></p>
	<p><u>VIDEO: CAR LIFT SAFETY</u> HTTP://WWW.YOUTUBE.COM/WATCH?V=BVDMCENUUIK <u>VIDEO HOW TO RAISE A VEHICLE</u> HTTP://WWW.YOUTUBE.COM/WATCH?V=8BE0XJKCZT0</p>
	<p>4. SLIDE 4 EXPLAIN Figure 11-3 Most newer vehicles have a triangle symbol indicating the recommended hoisting lift points.</p> <p>5. SLIDE 5 EXPLAIN Figure 11-4 (a) Tall safety stands can be used to provide additional support for a vehicle while on a hoist.</p> <p>6. SLIDE 6 EXPLAIN Figure 11-4 (b) block of wood should be used to avoid the possibility of doing damage to components supported by the stand.</p>

ICONS

Ch11 Vehicle Lifting & Hoisting



7. **SLIDE 7 EXPLAIN Figure 11-5** This training vehicle fell from the hoist when the pads were not set correctly. No one was hurt, but the vehicle was damaged.

8. **SLIDE 8 EXPLAIN Figure 11-6 (a)** assortment of hoist pad adapters that are often necessary to safely hoist many pickup trucks, vans, and sport utility vehicles.

9. **SLIDE 9 EXPLAIN Figure 11-6 (b)** view from underneath a Chevrolet pickup truck showing how the pad extensions are used to attach the hoist lifting pad to contact the frame.



10. **SLIDE 10 EXPLAIN Figure 11-7 (a)** In this photo the pad arm is just contacting the rocker panel of the vehicle.

11. **SLIDE 11 EXPLAIN Figure 11-7 (b)** This photo shows what can occur if the technician places the pad too far inward underneath the vehicle. The arm of the hoist has dented in the rocket panel.



HOLD DISCUSSION ON SETTING UP LIFT



DEMONSTRATE HOW TO SET THE LIFT PADS



12. **SLIDE 12 READ & EXPLAIN Figure 11-8** Drive-on-type ramps. Wheels on ground level must be chocked (blocked) to prevent accidental movement down ramp.



13. **SLIDES 13-24 OPTIONAL HOISTING VEHICLE**

HANDS-ON TASK **COMPLETE VEHICLE HOISTING TASK SHEET**

