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Halderman newsletter

August 2020

What's new with Jim?




WWW.JAMESHALDERMAN.COM




Book Resources

Resources supporting automotive instructors who teach using the Halderman book series.



Downloads

Conference PowerPoints, service information, training resources and more.



Pearson

Book ordering information, request exam copy, test bank questions and more.

I have asked automotive instructors what their toughest job is and this is what I learned and what I am doing to help:

- Assessment-** Creating and grading quizzes is the hardest job. As result, I have added four quizzes; two multiple choice, one short answer and one matching questions (with answer key) for each of the 136 chapters in Automotive Technology-6th. Quizzes for all of the systems books are coming soon.
- Task Sheets-** All of the ASE-correlated shop task sheets on the Halderman website are sorted by chapter and are in electronic format so that students can fill them out and submit them electronically.
- Finding and Organizing Resources-** Instructors have found and used a great video in the past. Now they are all selected and sorted by chapter. Videos (over 2,200) and animations (over 700) are all sorted on the Halderman website making it quick and easy to find and use the resources needed to teach their students.
- Lesson Plans-** To help new instructors or to meet the requirements of the administration, each chapter has a lesson plan that can be used to help guide the instructor through the chapter content.
- Power Points-** Instructors want to add animations and videos to the existing Power Point. Now save time because each chapter has a regular power point, as well as a **SUPER Power Point** that includes all of the animations and video links making teaching chapters quick and easy.
- Classroom Activities-** All instructors asked for something that they could give to their student that is challenging and cannot be answered by a quick Internet search. Now posted on the Halderman website under Automotive Technology-6th are four "assignments" under each chapter (544 total) online assignments that

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Where's Jim?

Due to the Coronavirus, all events have been canceled and I have no travel plans for the summer.

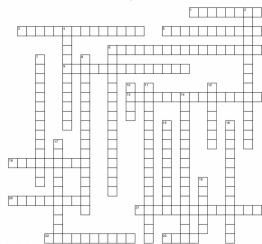
Keep up with me at:
www.jameshalderman.com
 Email Jim
 Facebook

Puzzle of the month

Find this month's puzzle of the month at this [link](#) and test your students knowledge on disc brakes.



Disc Brakes
Chapter 12



ACROSS

1 The lining of a brake is part of an assembly.

2 A vehicle's _____ is a suspension system that allows the vehicle to move up and down without transferring shock to the frame.

3 _____ is a type of suspension system that uses a coil spring to support the vehicle's weight.

4 A vehicle's _____ is a suspension system that uses a coil spring to support the vehicle's weight.

5 The _____ is a part of a vehicle's suspension system that allows the vehicle to move up and down without transferring shock to the frame.

6 A vehicle's _____ is a suspension system that uses a coil spring to support the vehicle's weight.

7 A vehicle's _____ is a suspension system that uses a coil spring to support the vehicle's weight.

8 A vehicle's _____ is a suspension system that uses a coil spring to support the vehicle's weight.

9 A vehicle's _____ is a suspension system that uses a coil spring to support the vehicle's weight.

10 A vehicle's _____ is a suspension system that uses a coil spring to support the vehicle's weight.

DOWN

11 A vehicle's _____ is a suspension system that uses a coil spring to support the vehicle's weight.

12 A vehicle's _____ is a suspension system that uses a coil spring to support the vehicle's weight.

13 A vehicle's _____ is a suspension system that uses a coil spring to support the vehicle's weight.

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19 A vehicle's _____ is a suspension system that uses a coil spring to support the vehicle's weight.

20 A vehicle's _____ is a suspension system that uses a coil spring to support the vehicle's weight.

help the students learn the important aspects of each chapter.

7. **Enjoyable**- Every instructor wants to make learning enjoyable for their students. Each chapter has a crossword and a word search puzzle that uses the key terms. These puzzles can be used for homework, classroom discussion or even a chapter quiz.
8. **Quick and Easy**-Share the resources with your students and post them to your Learning Management System (LMS) for easy access for students.

Auto Trivia



What does the 442 mean on this emblem?

- a. 400 cu. in, four speed and dual exhaust
- b. Four-barrel carburetor, four speed and dual exhaust
- c. Four bucket seats, four speed and 2 doors
- d. 442 horsepower

Answer at the bottom of this page!

FAQ

Why Are Some Brake Pads Slotted and Others Not?

Brake pads are designed by the vehicle manufacturer for each specific application. Some are tapered at the ends others are slotted and many are tapered and slotted. According to brake design engineers, these features are designed to help reduce brake noise. By changing the size of the pad area or by breaking it up into sections by slotting, the frequency of the sound generated during braking changes. For best results, use a replacement brake pad that has the same design features as the original brake pads.



Sample ASE certification-type question

Question:

The letters "EF" on the edge of a brake lining mean _____.

- a. Wear resistance codes
- b. Relative noise level codes
- c. Coefficient of friction codes
- d. Brake lining composition

Answer/explanation

The correct answer is c. The edge code letters represent the coefficient of friction codes; the first letter indicates when the lining is cold and the second when the lining is hot. Answer a is not correct because the edge codes do not indicate wear factors. Answer b is not correct because edge codes do not indicate noise factors. Answer d is not correct because even though parts of the code identify the manufacturer, they do not indicate the composition of the lining material.

Tech Tip

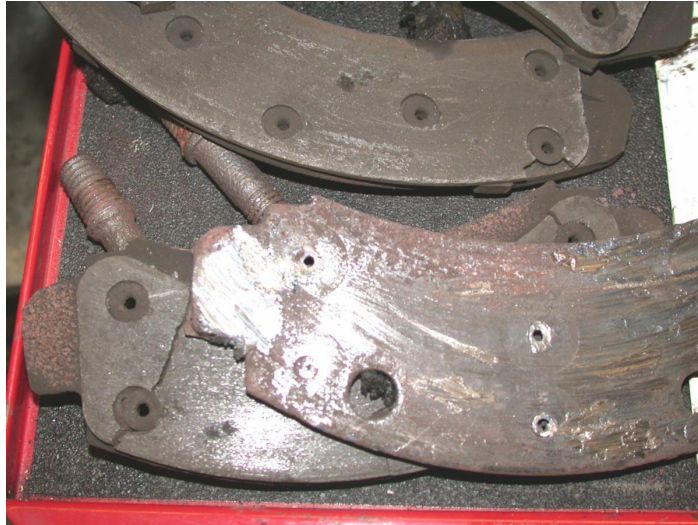
The Parking Brake Trick

When attempting to diagnose a brake pedal pulsation, drive to a deserted area or a parking lot and try stopping the vehicle using the parking brake. If a vibration occurs, the problem is due to a fault with the rear brakes. If a vibration does not occur except when using the service brakes, the problem is most likely due to a fault with the front brakes.

Case Study

Three Brake Jobs in 40,000 Miles

A service technician was asked to replace the front disc brake pads on a Buick because the brakes were making a grinding sound. This was the third time that the front brakes needed to be replaced. Previous brake repairs had been limited to replacement of the front disc brake pads only. When the calipers were removed it was discovered that the pads were completely worn down to the steel backing. The technician also noticed something at the rear of the vehicle that told the whole story—a trailer hitch. The owner confirmed that two heavy jet skis were towed in hilly terrain. The technician



recommended overhauling the front disc brake calipers to prevent the possibility of the front pads dragging. The technician also recommended an inspection of the rear brakes. The rear brakes were glazed and out of adjustment. The technician received permission to replace the rear brakes, replace both front calipers, and install quality disc brake pads. When the customer returned, the technician advised the customer to use a lower gear in the transmission on long downhill roads to help keep the brakes from overheating and failing prematurely.

Summary:

- * Complaint-The front brake pads needed replacement more often than expected.
- * Cause-The front calipers were not retracting and the rear brakes were not working as designed.
- * Correction-Front calipers were replaced and the rear brakes were serviced. Plus, the owner was advised to select a lower gear when descending long grades to reduce the load on the brakes.

Straight Talk

From the July 25 Wheels section of Dayton Daily News

Reader Asks About Tire Sizes

Wheels:

Bruce from Florida writes:

"I have a 2004 Ford Mustang Cobra convertible and I can't find tires that are the same size as what came on it in 2004. They are not worn out but I have been told that I should replace them because they are 16 years old. The size is 245/45X 17 and I am not able to locate these tires or at least at a reasonable cost. Is there another size I could use? Any suggestions would be appreciated".

Halderman:

Thanks for writing and you are wise to be shopping for replacement tires. Vehicle manufacturers Ford, Nissan, Mazda, and Mercedes recommend replacing tires after six years regardless of tread depth. Tire manufacturers Michelin and Continental recommends that tires that are ten years old be replaced. Therefore, according to the industry standards, your Mustang is definitely in need of new shoes.

I checked the size comparison for various alternative sizes using an internet search and found that 255/40 X 17 will work great and should be a size that is easier to find. A couple of websites that can be helpful include:

- www.willtheyfit.com
- www.wheel-size.com

Best wishes in locating new tires and enjoy your convertible.

Have an automotive question? Please write to Jim with your questions at jim@jameshalderman.co



Trivia question answer: b.

Please let me know what you think of the newsletter. I would love to include any of your automotive news, trivia questions or any tech tips you might have. Send me your suggestions! You can email me [here](#) or visit [my website](#). You can connect with me on Facebook, Twitter and LinkedIn too (links above).

Regards,
Jim Halderman

James D. Halderman writes automotive technology textbooks for [Pearson Education](#). He is an ASE-certified Master Technician with more than 20 years instructional experience.