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Halderman newsletter

January 2016

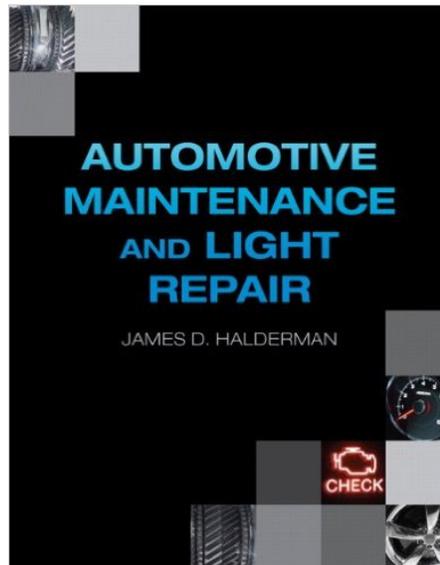
## What's new with Jim?

It is the start of a New Year and time to get back to work, and maybe start thinking of the next semester or even the 2016-2017 school year. If your program is, or will be, certified under the NATEF area of Maintenance and Light Repair (MLR), please consider using the Pearson textbook specifically designed and matched to the MLR tasks. Some highlights include:

- 70 chapters - Using many shorter chapters makes teaching and learning easier because the content is broken down into smaller chunks.
- NATEF correlated task sheets are available - The task sheets can be a purchased item or available (FREE) on the Pearson website in Word format so they can be changed or customized to meet the needs of your program.
- Instructor resources - Pearson offers the following on their website free to instructors and include:
  1. Power Points for all chapters with all chapter images
  2. Test bank software and test bank questions which allow instructors to construct their own quizzes and tests
  3. Instructor manual- includes the answers to all of the questions in the text plus list the page number in the text where the correct answer can be found
  4. NATEF-correlated task sheets- Free

For a free exam copy, please follow the link to the Pearson website from my website:

- [www.jameshalderman.com](http://www.jameshalderman.com)
- Click on "Jim's Books"
- Select "Automotive Principles A1-A8"
- Select "Automotive Maintenance and Light Repair"
- Click on "Instructor resources"
- Click on "Request exam copy"



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## Find Jim online

[www.jameshalderman.com](http://www.jameshalderman.com)

Email Jim

Facebook

### WHERE'S JIM?

Shows Jim will be attending this month.

**KOI** (Cincinnati) - January 8-9

**NAIAS Detroit Auto Show** (media preview days) -January 11-12

Please continue to follow me on [LinkedIn](#), [Facebook](#) and [Twitter](#) for up-to-the-minute updates and for the fantastic interaction I receive from many of you.

Sincerely,  
Jim

## Auto Trivia

Where was this vehicle assembled?

- a. United States
- b. Canada
- c. Mexico
- d. Italy



Find a useful chart of VIN number IDs for each country on my [Facebook](#) page. Find the answer at the end of this newsletter!

## Sample ASE question

### QUESTION:

Power steering fluid is observed dripping out of the boots of the power rack and pinion steering gear assembly. What is the most likely cause?

- a. A loose or worn inner tie rod end (ball-socket assembly)
- b. Leaking control valve seals
- c. A leaking inner rack seal
- d. A loose stub U-joint



### ANSWER:

The correct answer is c. A leaking inner rack seal will allow power steering fluid to leak into the rack housing and eventually drip from around the dust boots, which are designed to keep water and dirt from getting into the rack housing and are not designed to seal power steering fluid. Answer a is not correct because a loose or worn inner tie rod end boot will not cause a power steering fluid leak because the power steering fluid should be sealed by the inner and outer rack seals. Answer b is not correct because a leaking control valve seal will cause hard steering, especially when the vehicle is cold, but will not cause an external leak. Answer d is not correct because a loose stub shaft retaining nut could cause fluid leakage out of the top of a "hat" portion of the steering gear and not out of the boots.

## Tech Tip

### "Red Rules"

Many new tires have painted dots placed there by the tire manufacturer. **Yellow Dot** - Indicates the light (static) balance point of the tire. **Red Dot** - Indicates the "radial force variation first harmonic maximum." If a tire has both red and yellow dots, the red dot has priority so ignore the yellow dot. Match the yellow dot to the wheel valve stem if there is no red dot. Just remember "red rules". If any other color of dot is seen, ignore them as they are used for factory purposes only.



## Straight Talk

From the December 26, Wheels section of Dayton Daily News

### Reader asks why new tires seemed to lower fuel economy

**Wheels:** An e-mail from David asks, "I am the sole owner of a 2008 Camry with 128,000 miles on it. It is in seemingly great condition, as I have maintained it with great care, with regular oil changes (4,000-5,000 miles) and all the other routine maintenance requirements. But since new tires were installed, my fuel economy has decreased 12-15%. I mentioned this to my local Toyota dealership (who does most of my maintenance) and they said that without the "Check Engine" light illuminating (it's not), there's nothing they can do. I did notice some mild engine surge at idle a month or 2 ago, but that stopped and has not reoccurred. Do you have any ideas? Am I being too "anal" over "normal" fuel economy fluctuations?"

**Halderman:** With your history with the vehicle, it appears that something happened and that could be a few things including:

1. The tires are very good, but may not be low rolling resistance (LRR) type tires.
2. Double check that the inflation pressure is as specified on the driver's door placard.  
NOTE: The advice from a Goodyear engineer is, "The tires could be some of it. Worn tires give the least rolling resistance so depending on what the old tires were, there could be 2 mpg between old, low rolling resistance".
3. It is normal for fuel economy to drop in cold weather due to the change to winter-blend gasoline and the colder temperatures making any engine use fuel to achieve normal operating temperature.

*Have an automotive question? Please write to Jim with your questions at [jim@jameshalderman.com](mailto:jim@jameshalderman.com)*

**Trivia question answer: D.**

First character on the VIN:

- 1 United States
- 2 Canada
- 3 Mexico
- 4 United States
- 5 United States
- 6 Australia
- 7 New Zealand
- 8 Argentina
- 9 Brazil
- J Japan
- K Korea

L China  
M India  
N Turkey  
P Philippines  
R Taiwan  
S England  
T Czechoslovakia  
U Romania  
V France  
W Germany  
X Russia  
Y Sweden  
Z Italy

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.*