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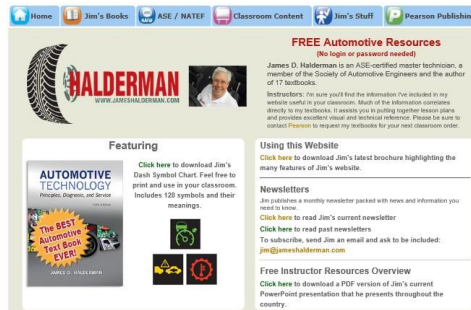
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Halderman newsletter

December 2017

What's new with Jim?

I heard from my publisher, Pearson Education, that the Halderman automotive series now has 60% of the post-secondary market. This means that all of the other publishers share the remaining 40%. Here is why I think the Halderman series of automotive textbooks sell so well:



- Well organized with clearly named chapters
Many short chapters that makes teaching and learning easier
Full color photos that show the actual parts and components to make the subject come alive
All answers to the questions can be easily found by students in the text material
Up-to-date with all recent topics and testing procedures
Instructor and student support including:

- Pearson website has a test bank of hundreds of questions with answers
Instructor manual with the answers to all of the questions in the text
Halderman website www.jameshalderman.com has all of the following that is open and FREE, so no login or password is needed:

- Task sheets- in Word and as a PDF so they can be filled out electronically
Power Points- sorted by chapter
Lesson plans
Animations- (500+)
Videos- (2,000+)
Puzzles
Service information including:

- Lug nut torque specifications
TPMS relearn procedures
Oil change specifications and how to reset the oil life monitor
Wiring diagrams for all vehicles
TSBs for all vehicles

NEW: Now posted on the homepage is a chart showing 128 dash symbols with descriptions that is FREE to download. Many shops

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Where's Jim?

I will be giving a presentation titled "Automotive Update-2018" with Curt Ward, my co-author of the Light Diesel Engine book, at Triton College in Chicago, on Friday, December 1.

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 transmissions.

Hydraulic System Parts and Operation Chapter 4 crossword puzzle grid with clues for ACROSS and DOWN.

are using the chart to help customers identify what warning symbol they are seeing on the dash instead of the "horseshoe" (TPMS) or the "genie light" (oil pressure).

## Auto Trivia

What is this car?



- a. Austin Healy
- b. Triumph TR4
- c. Morris Minor
- d. Jaguar XK 140

**Answer at the bottom of this page!**

## FAQ

### **What do all the letters and numbers mean in transmission designations?**

The numbers and letters usually mean the following:

\* Number of forward speeds. The number of forward speeds may include four, five, or six such as the GM 4T60-E four-speed unit and the ZF 5HP24 five-speed unit.

\* Front-wheel drive or rear-wheel drive. The letter T usually means transverse (front-wheel-drive transaxle) such as the Chrysler 41-TE; the L means longitudinal (rear-wheel-drive transmission) such as the General Motors 6L80; and the R means rear wheel drive such as the Ford 5R55E.

\* Electronically controlled. The letter E is often used to indicate that the unit is electronically controlled, and M or H is used to designate older mechanically (hydraulically) controlled units. Most automatic transmissions built since the early 1990s are electronically controlled and therefore the E is often included in the designation of newer designs of transmission or transaxles.

\* Torque rating. The torque rating is usually designated by a number where the higher the number, the higher the amount of torque load the unit is designed to handle. In a GM 6L80-E, the torque rating is 80. Always check service information for the exact transmission designation for the vehicle being serviced.

## Sample ASE certification-type question

### Question:

Proper assembly of an automatic transmission/transaxle can be verified by performing the following tests except:

- End play measurements
- Clutch pack measurements
- Vacuum testing the regulator valve
- Air pressure checks

### Answer/Explanation:

The correct answer is c. Answer c is correct because the regulator valve in the pump usually cannot be checked by vacuum testing. Answers a, b, and d are not correct because all are checks that should be performed on an automatic transmission/transaxle to verify proper assembly before installing the unit in the vehicle.

## Tech Tip

### Use all resources

An experienced technician will check all available diagnostic service information from technical service bulletins (TSBs) for the vehicle. Some vehicles have known problems, and their repair is described in a TSB. These are called pattern failures. Diagnostic information is also available on the Internet through various organizations, such as:

- Automatic Transmission Rebuilders Association (ATRA)
- Automatic Transmission Service Group (ATSG)
- Identifix,
- International Automotive Technicians Network (iATN)

## Straight Talk

From the November 25, Wheels section of Dayton Daily News

### The Case of the Horseshoe Dash Symbol

#### Wheels:

Mike M. from Centerville asks: "This fall, when it got cold, an orange or amber warning light came on that looks like a horseshoe. After driving the car for a few miles, the light went out and stayed out for the rest of the day. I have had warning lights come on before but nothing that looks like a horseshoe. I tried to tighten my gas cap and that has worked for me in the past. However, the next morning the horseshoe light came on again. What do you think this is and what is wrong with my car?"

#### Halderman:

The "horseshoe" shaped dash warning light represents a tire and the warning light is used to notify the driver of a tire that has low inflation pressure. All passenger vehicles since 2007 have been equipped with a tire pressure monitoring system (TPMS) that will light a dash light to warn the driver of a tire that has lost inflation pressure by 25% of the recommended pressure as stated on the driver's door placard. What likely happened was that when the temperature dropped, the pressure inside the tire decreased because as the temperature and pressure are related. A drop in temperature of 10 degrees will cause the tire pressure to drop 1 PSI.



Therefore, check the inflation pressure of all of the tires, including the spare with a full-size spare tire is used because many SUVs use a tire pressure sensor in the spare as well as in each of the four tires on the ground. If one tire continues to lose inflation pressure, ask a professional serviced technician to find the root cause and get it corrected to keep the light out. For a free chart that can be downloaded showing all of the dash warning symbols with their meaning, visit [www.jameshalderman.com](http://www.jameshalderman.com).

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

**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.*